Service Manual

PIONEER
The Art of Entertainment
TOYOTA

ORDER NO.
CRT2067

LEXUS GS300,400
AUDIO SYSTEM
POWER AMPLIFIER

VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LEXUS GS300	USA,CANADA EUROPE MIDDLE EAST	August 1997	86280-30370	——	GM-8076ZT/E
LEXUS GS400	UNITED KINGDOM AUSTRALIA HONGKONG	August 1997	86280-30360	——	GM-8176ZT/E

Manufactured for TOYOTA
by PIONEER ELECTRONIC CORPORATION

PUB. NO. CRT2067

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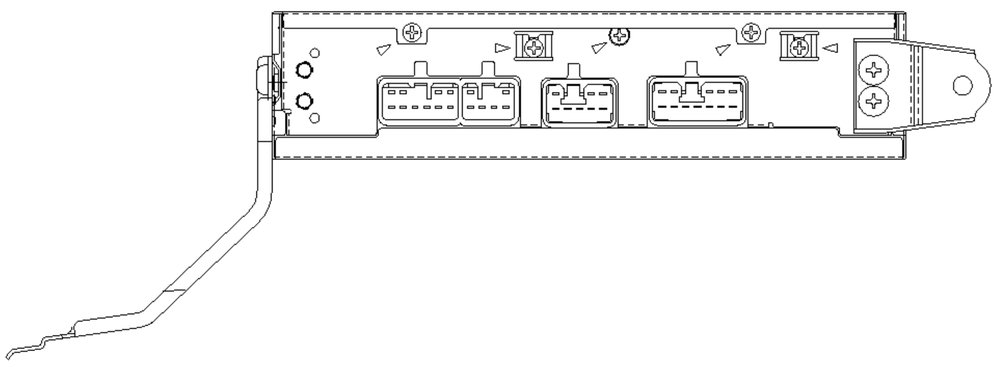
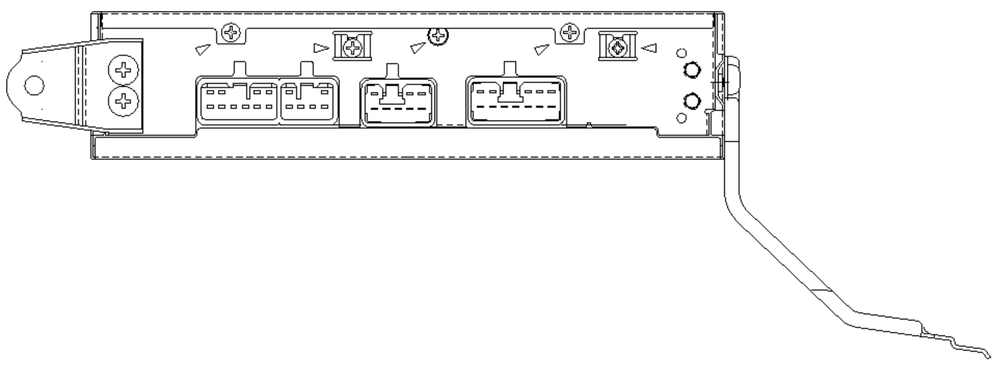
GM-8076ZT,8076ZT-91,8176ZT,8176ZT-91

GM-8076ZT/E



GM-8176ZT/E



NOTE:

- The GM-8076ZT-91/E and GM-8176ZT-91/E are supplementary genuine part for a TOYOTA vehicle, and a Pioneer product for recycling stock.
- As for the structure and electrical system, there is no difference between the GM-8076ZT-91/E, GM-8176ZT-91/E and GM-8076ZT/E, GM-8176ZT/E.

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

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2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(GM-8076ZT-91/E,GM-8176ZT-91/E)

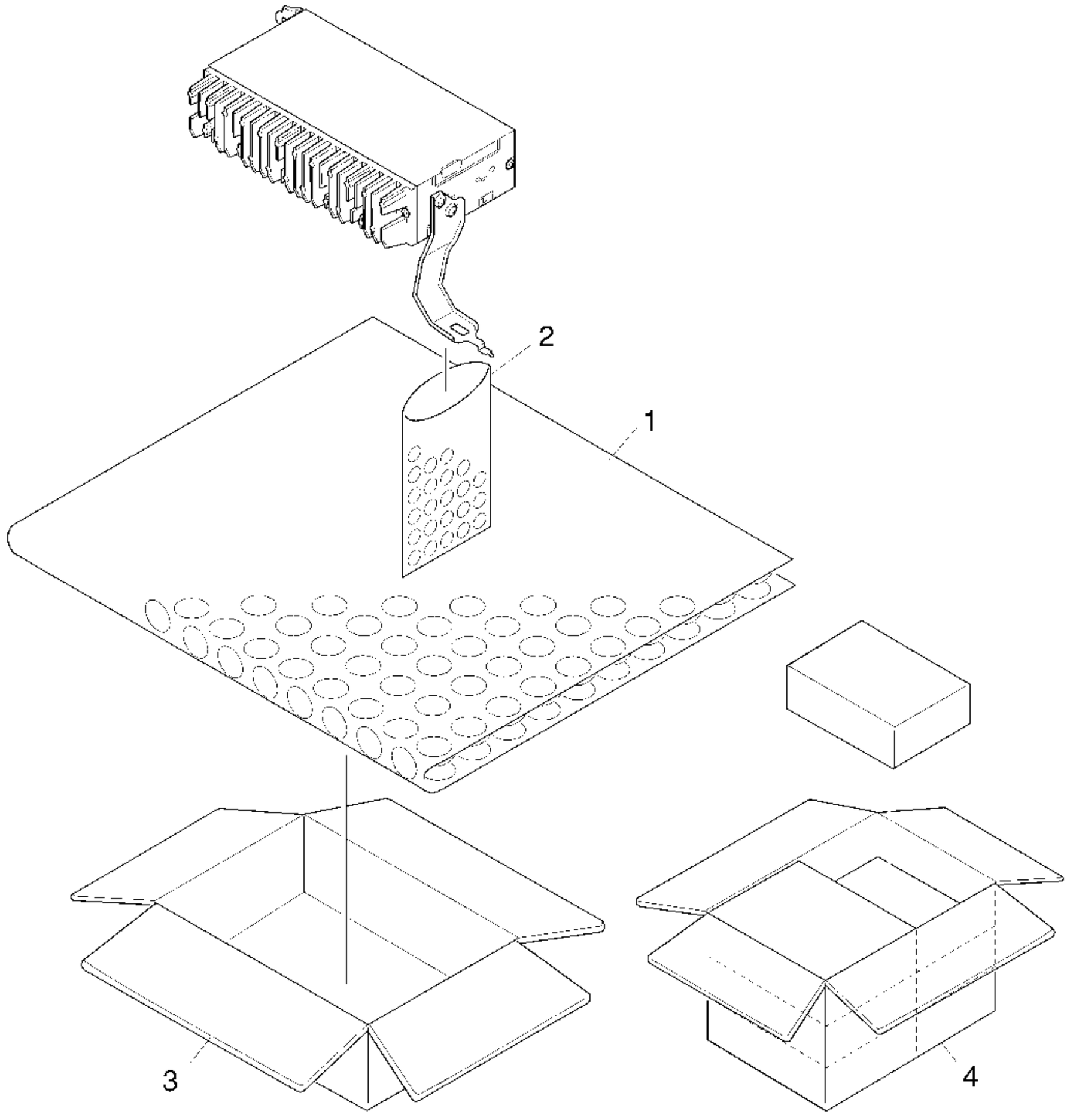

Fig. 1

NOTE:

- Parts marked by "*"are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ▼ mark on the product are used for disassembly.

- **PACKING SECTION PARTS LIST**

Mark No.	Description	Part No.
1	Cover	CEG1045
2	Aircap	CEG1081
3	Carton	CHG3331
4	Contain Box	CHL3331

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2.2 EXTERIOR

● **GM-8076ZT/E**

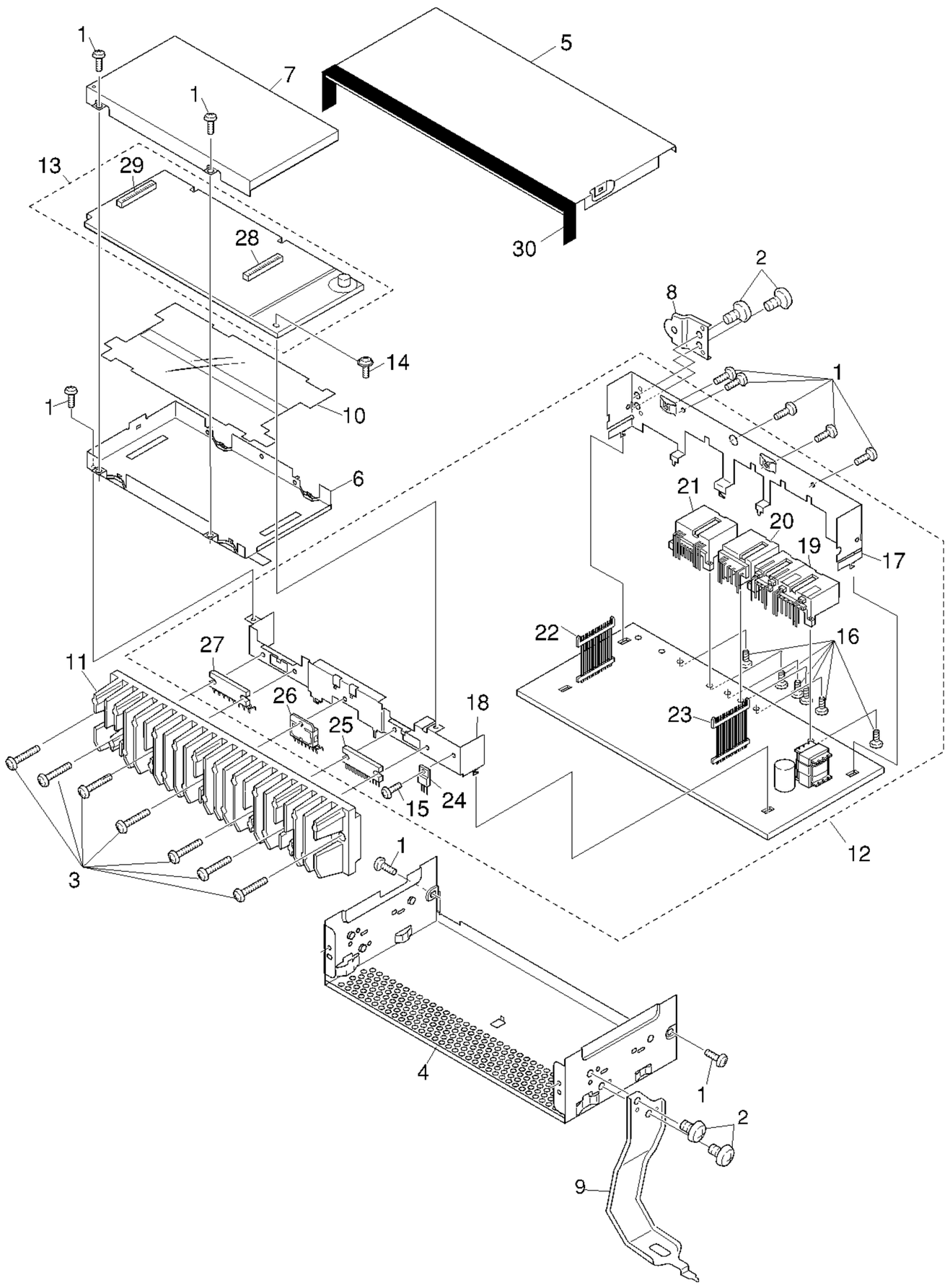

Fig. 2

● **EXTERIOR SECTION PARTS LIST**

● **GM-8076ZT/E**

Mark	No.	Description	Part No.
	1	Screw	BMZ30P060FMC
	2	Screw	BMZ50P060FMC
	3	Screw	CBA1327
	4	Chassis	CNA1852
	5	Case	CNB2102
	6	Shield	CNC6809
	7	Shield	CNC6810
	8	Bracket	CNC6813
	9	Bracket	CNC6811
	10	Insulator	CNM5537
	11	Heat Sink	CNR1432
	12	Amp Unit	CWM4926
	13	DSP Unit	CWM4927
	14	Screw	IMS30P060FMC
	15	Screw	BMZ30P060FMC
	16	Screw	CBA1393
	17	Bracket	CNC6807
	18	Holder	CNC6808
	19	Connector(CN901)	CKM1222
	20	Connector(CN902)	CKM1244
	21	Connector(CN903)	CKM1245
	22	Plug(CN905)	CKS3631
	23	Plug(CN906)	CKS3631
	24	IC(IC901)	NJM7805FA
	25	IC(IC801)	TA8221AH1
	26	IC(IC821)	PAL001A
	27	IC(IC851)	TA8225H-LF1
	28	Socket(CN51)	CKS3632
	29	Socket(CN52)	CKS3632
*	30	Seal	CNM5381

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● **GM-8176ZT/E**

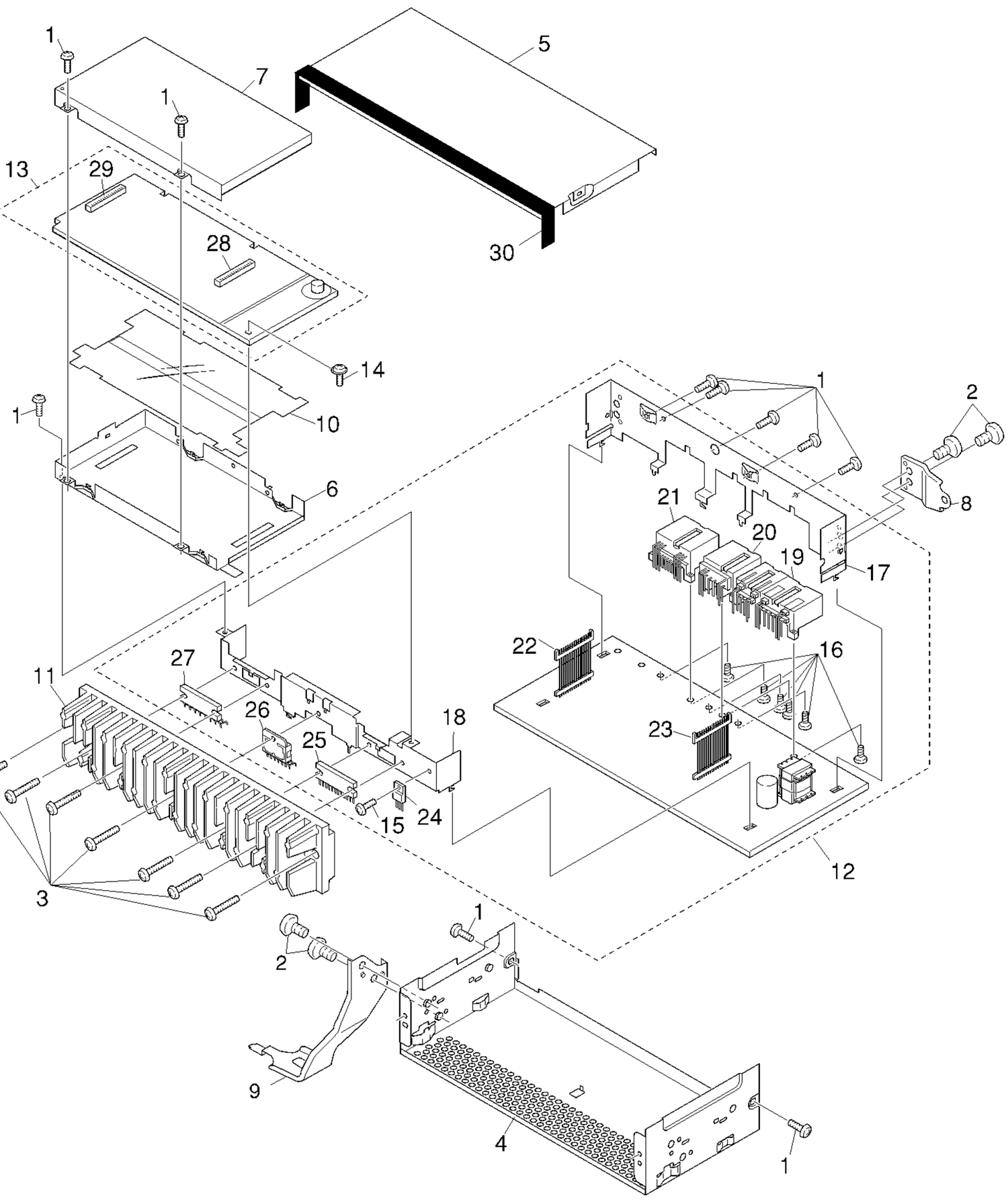

Fig. 3

● **EXTERIOR SECTION PARTS LIST**

● **GM-8076ZT/E**

Mark No.	Description	Part No.
1	Screw	BMZ30P060FMC
2	Screw	BMZ50P060FMC
3	Screw	CBA1327
4	Chassis	CNA1852
5	Case	CNB2102
6	Shield	CNC6809
7	Shield	CNC6810
8	Bracket	CNC6813
9	Bracket	CNC6812
10	Insulator	CNM5537
11	Heat Sink	CNR1432
12	Amp Unit	CWM4944
13	DSP Unit	CWM5117
14	Screw	IMS30P060FMC
15	Screw	BMZ30P060FMC
16	Screw	CBA1393
17	Bracket	CNC6807
18	Holder	CNC6808
19	Connector(CN901)	CKM1222
20	Connector(CN902)	CKM1244
21	Connector(CN903)	CKM1245
22	Plug(CN905)	CKS3631
23	Plug(CN906)	CKS3631
24	IC(IC901)	NJM7805FA
25	IC(IC801)	TA8221AH1
26	IC(IC821)	PAL001A
27	IC(IC851)	TA8225H-LF1
28	Socket(CN51)	CKS3632
29	Socket(CN52)	CKS3632
* 30	Seal	CNM5381

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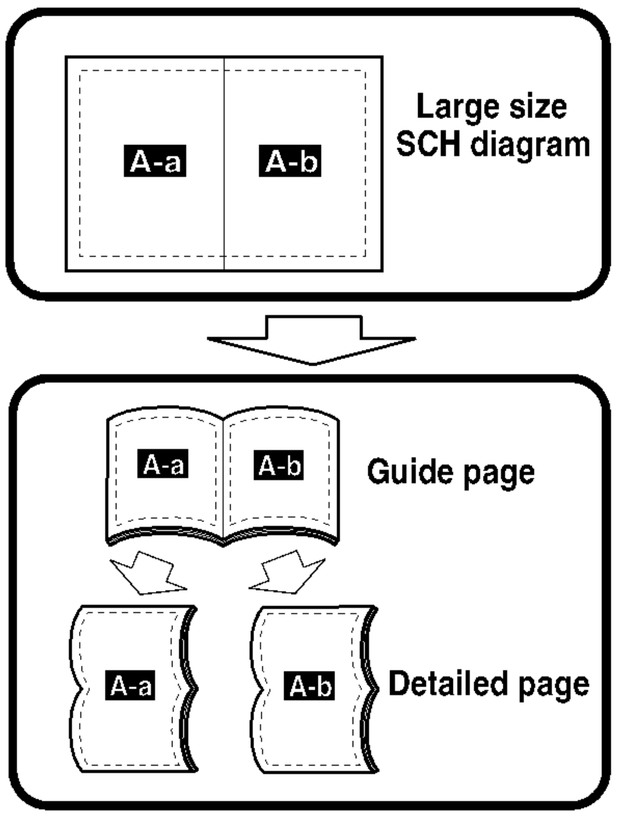
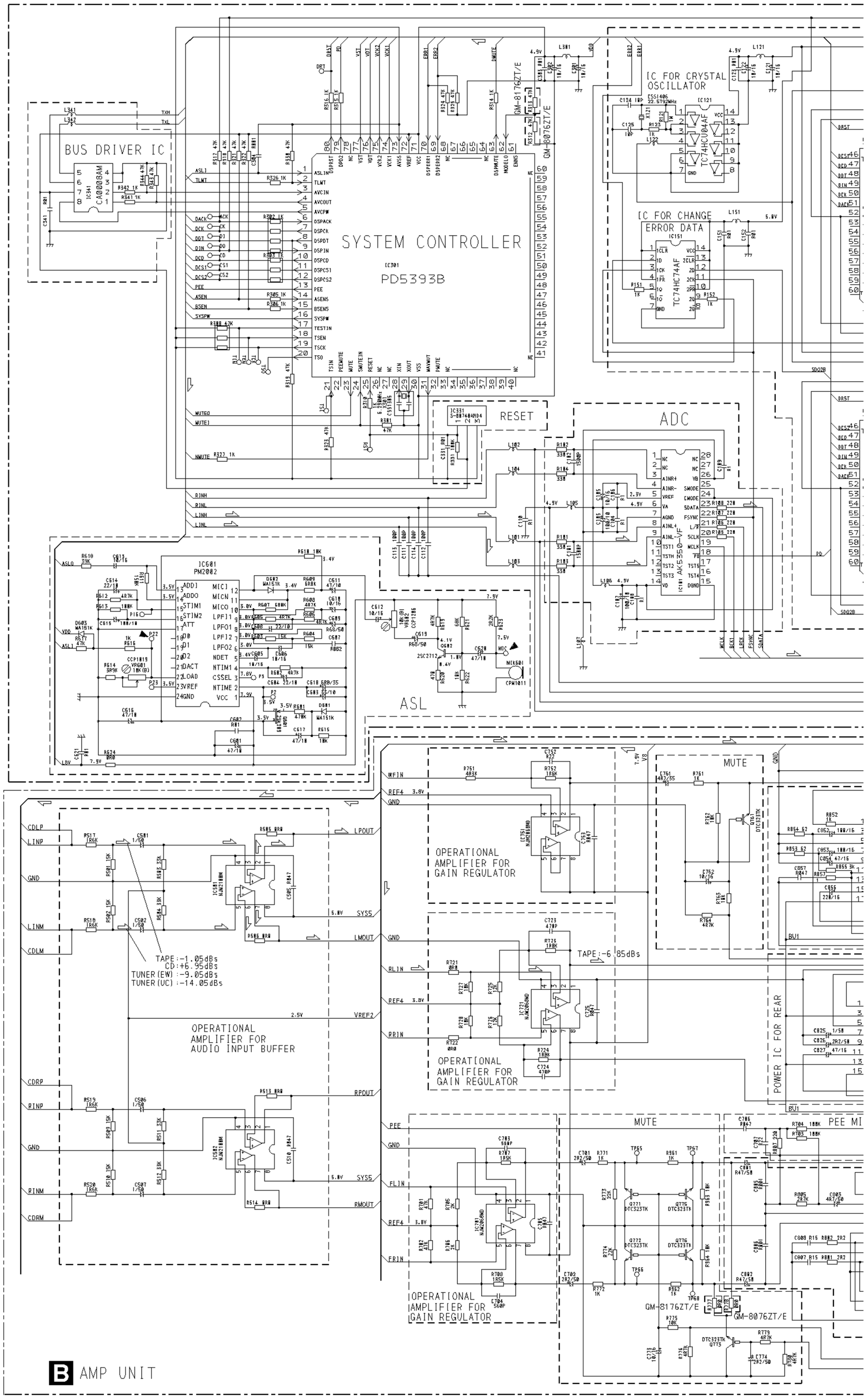
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.





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A-b

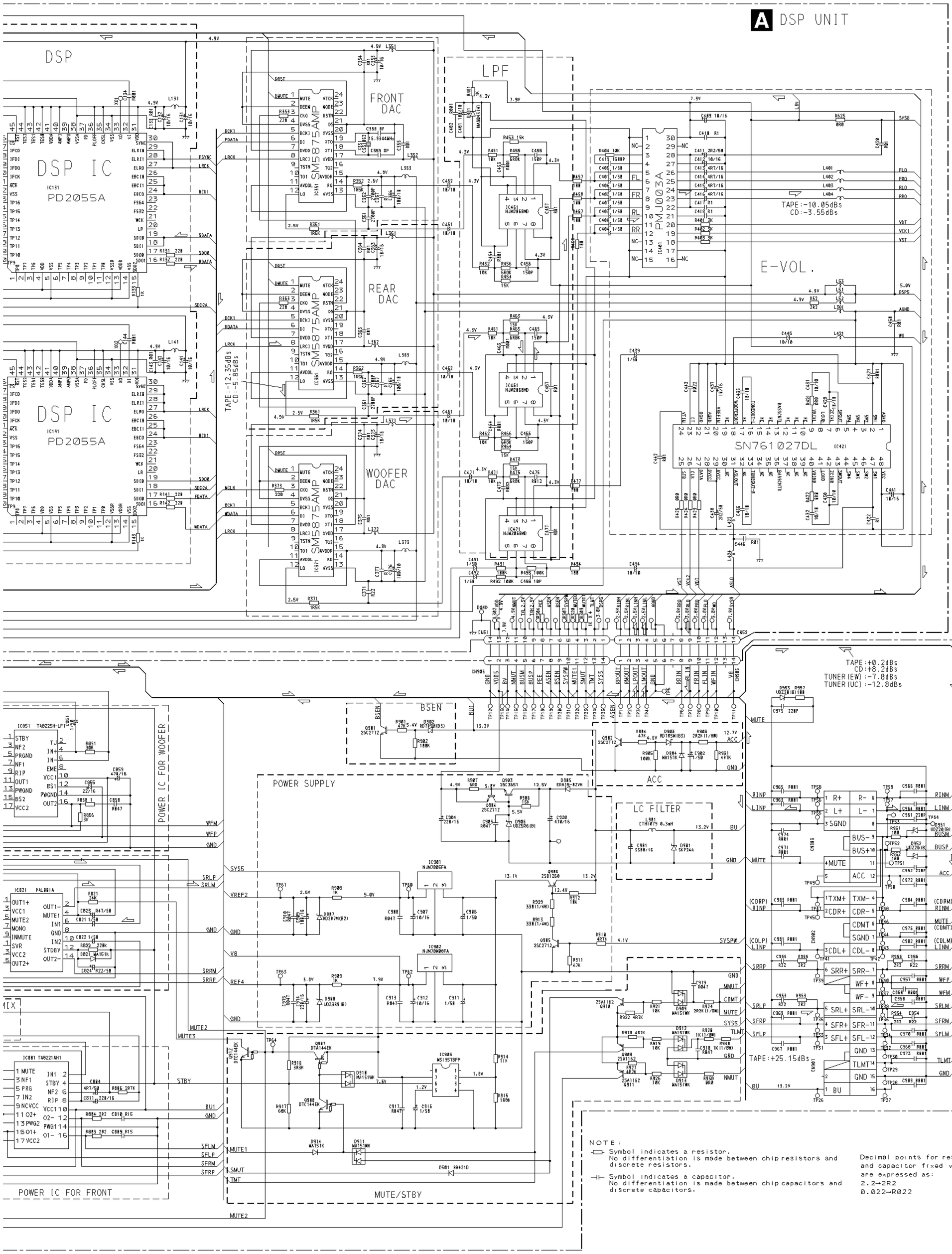

Fig. 4

A B

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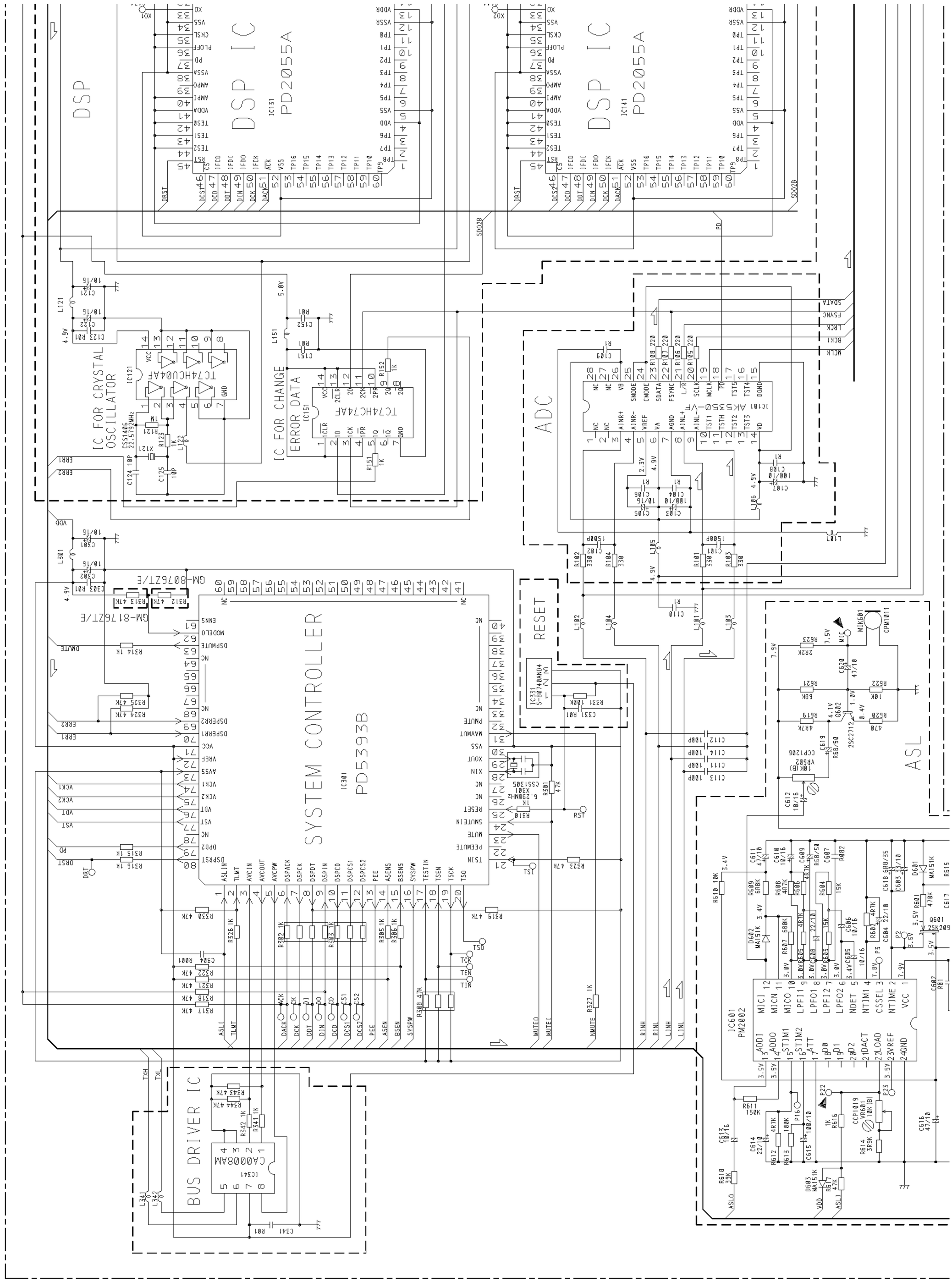
A-b

A-a



A-a

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A-b

A-a

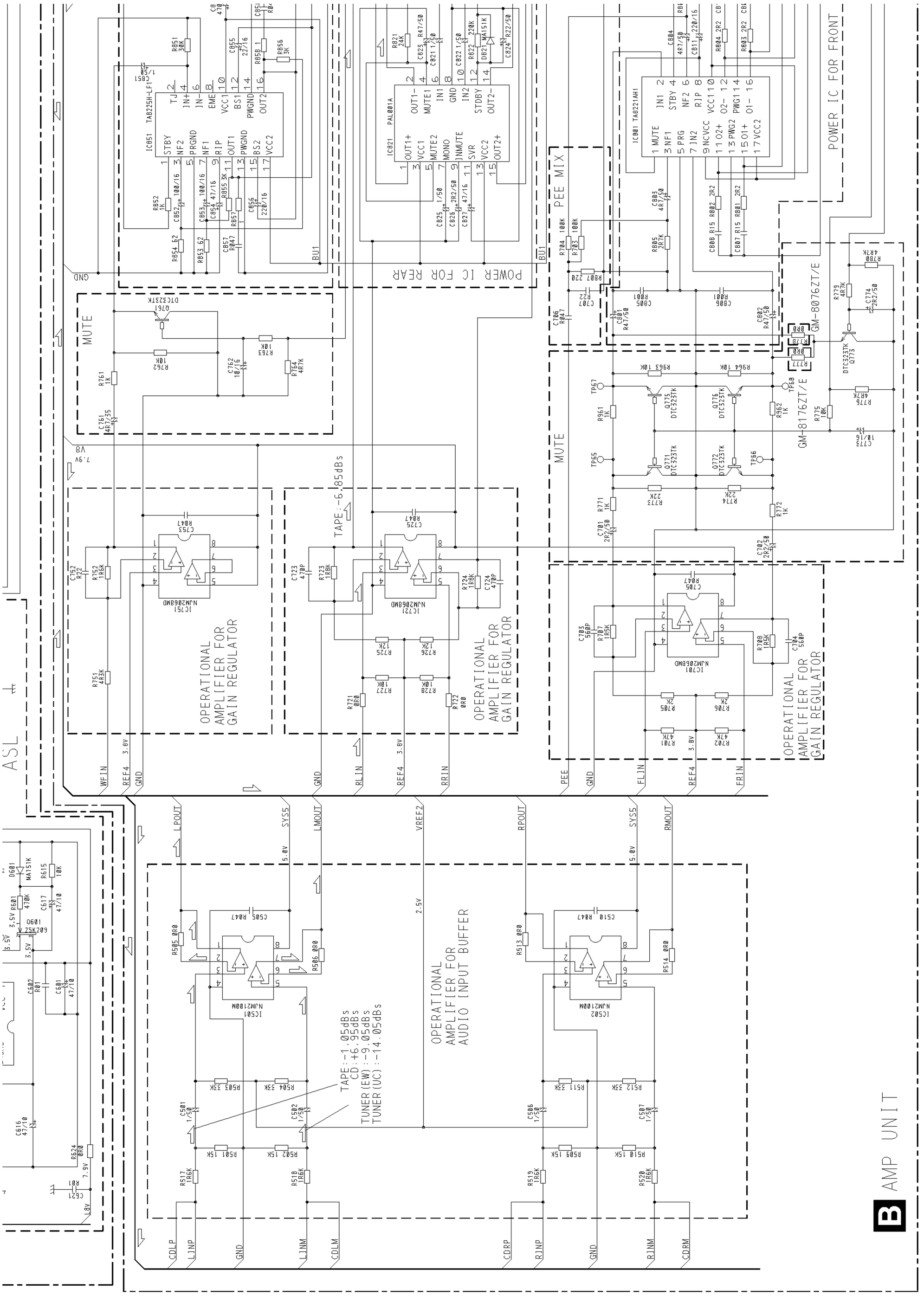

Fig. 5

A-a B

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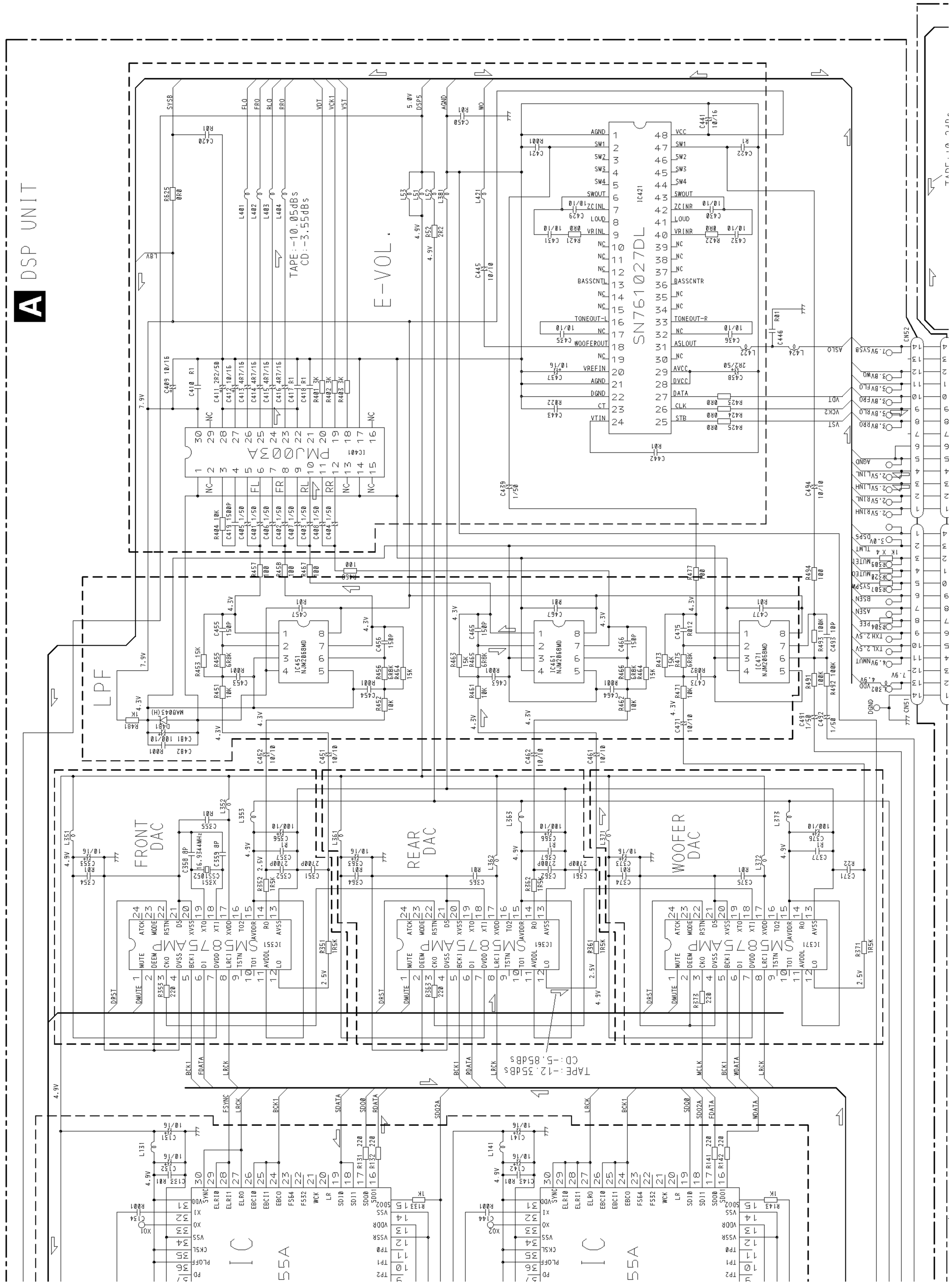
A-a A-b

A DSP UNIT



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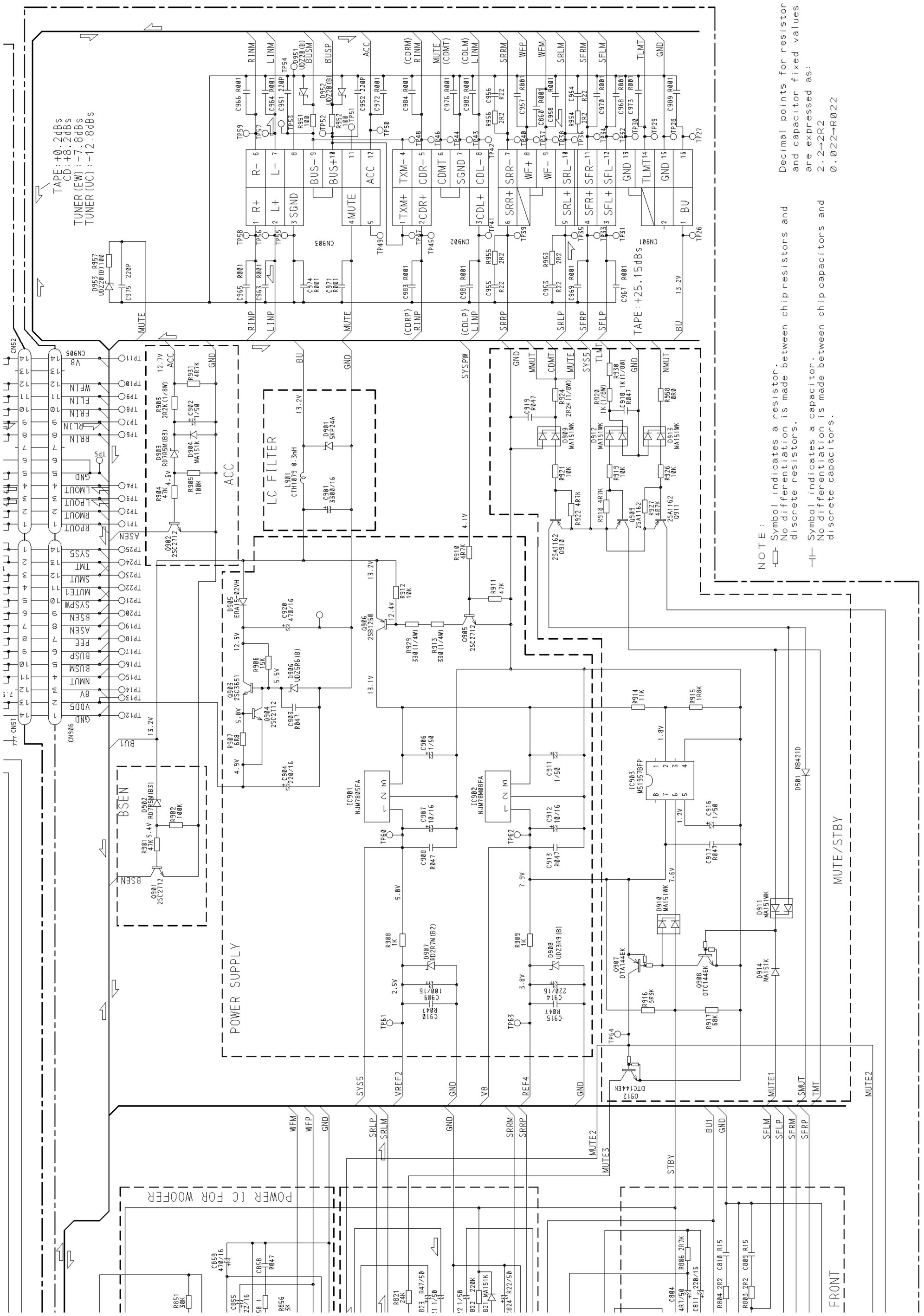

NOTE :
- ⊣⊢ Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- ⊣⊢ Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
Ø.Ø22→RØ22

A-a A-b

Fig. 6

A-b B

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4. PCB CONNECTION DIAGRAM

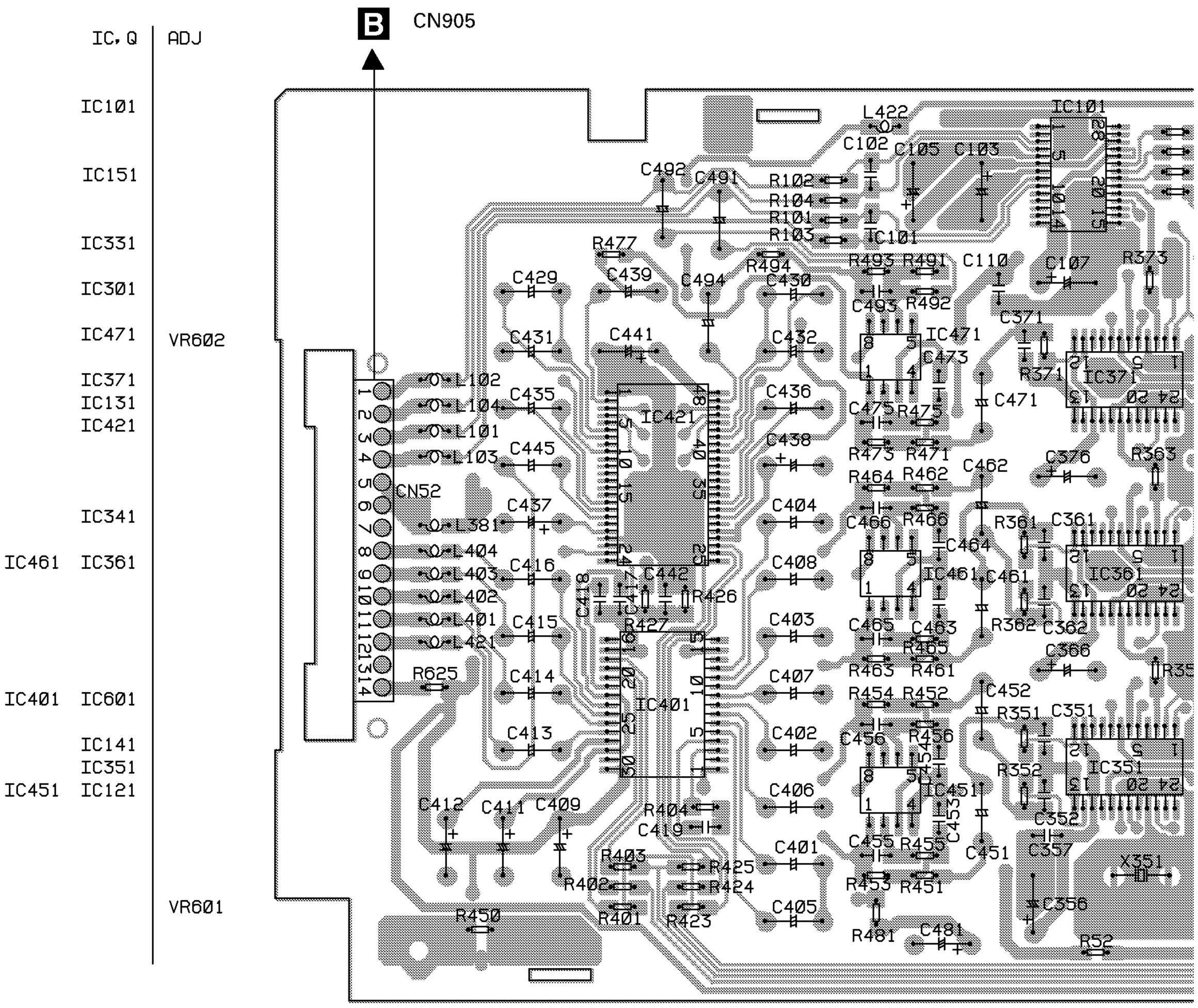
4.1 DSP UNIT

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams

A DSP UNIT



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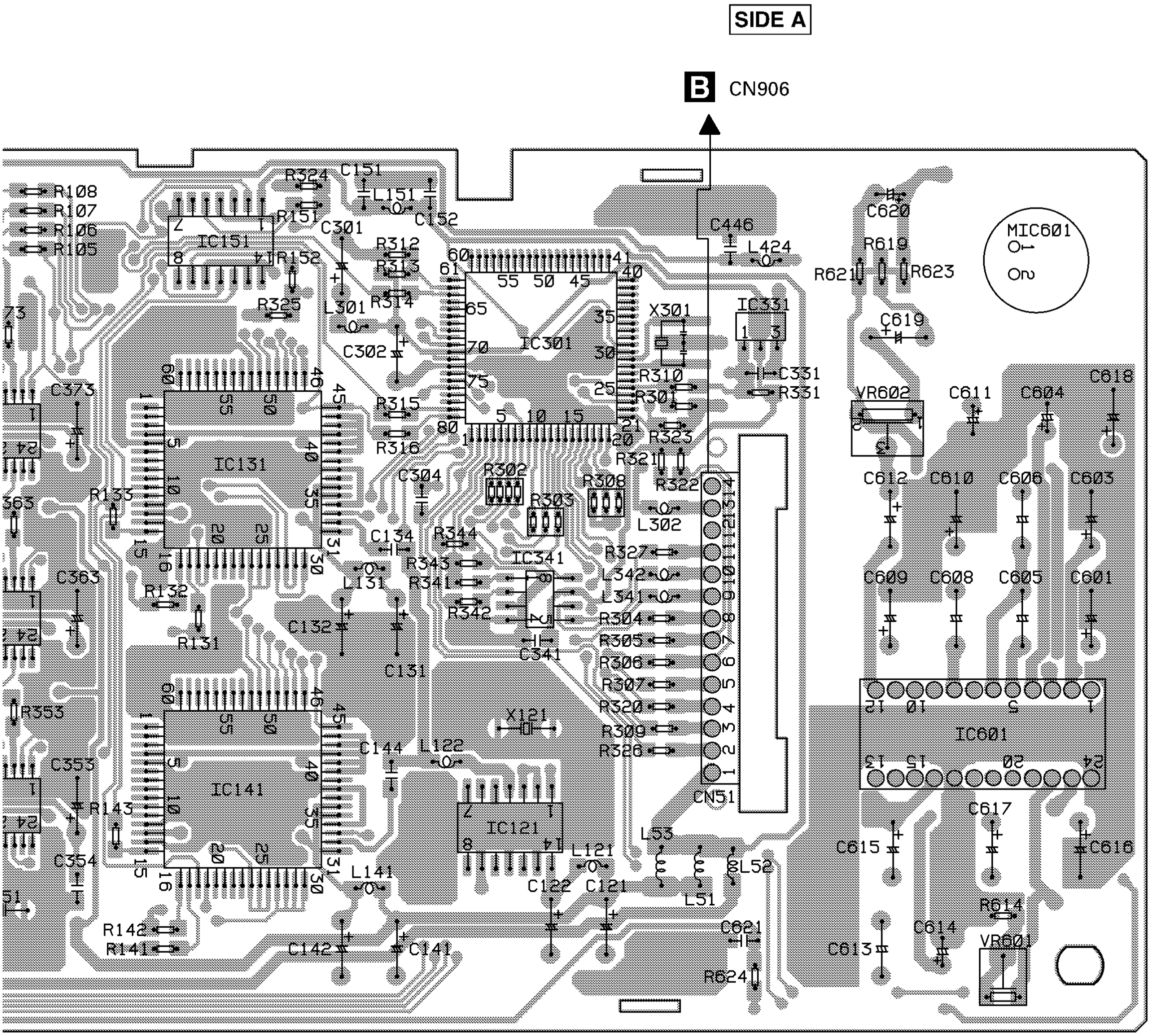

Fig. 7

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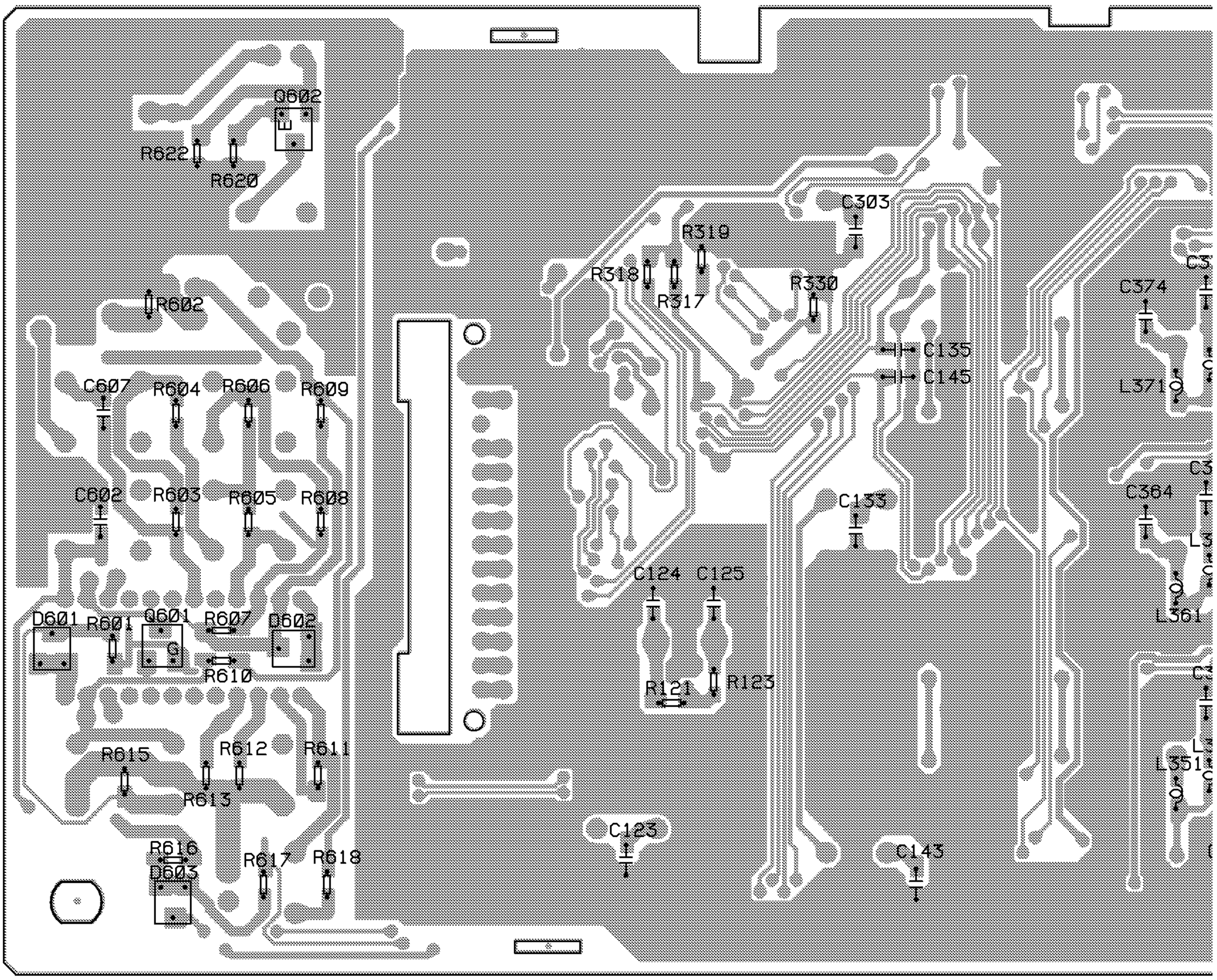
A DSP UNIT



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SIDE B

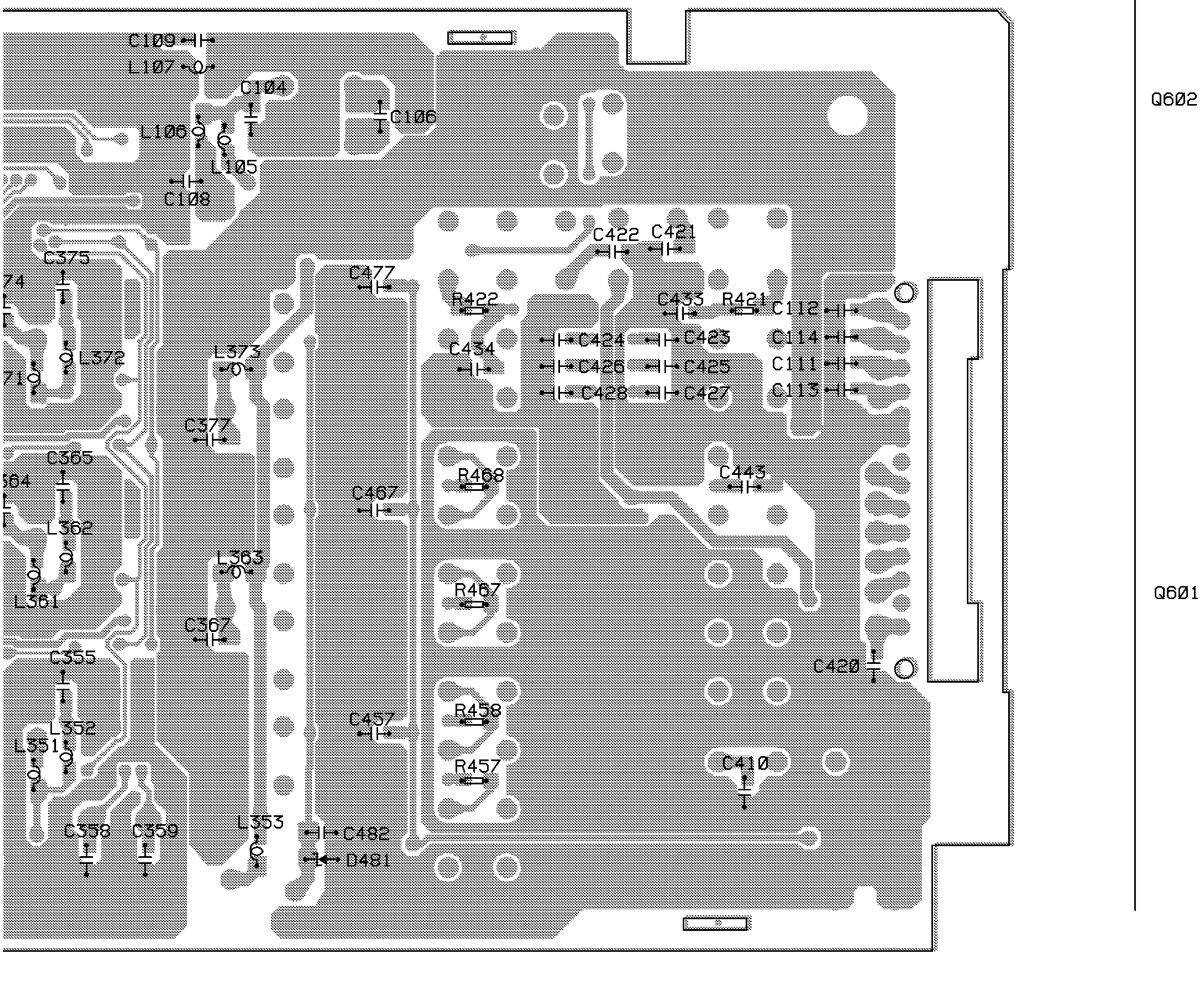

Fig. 8

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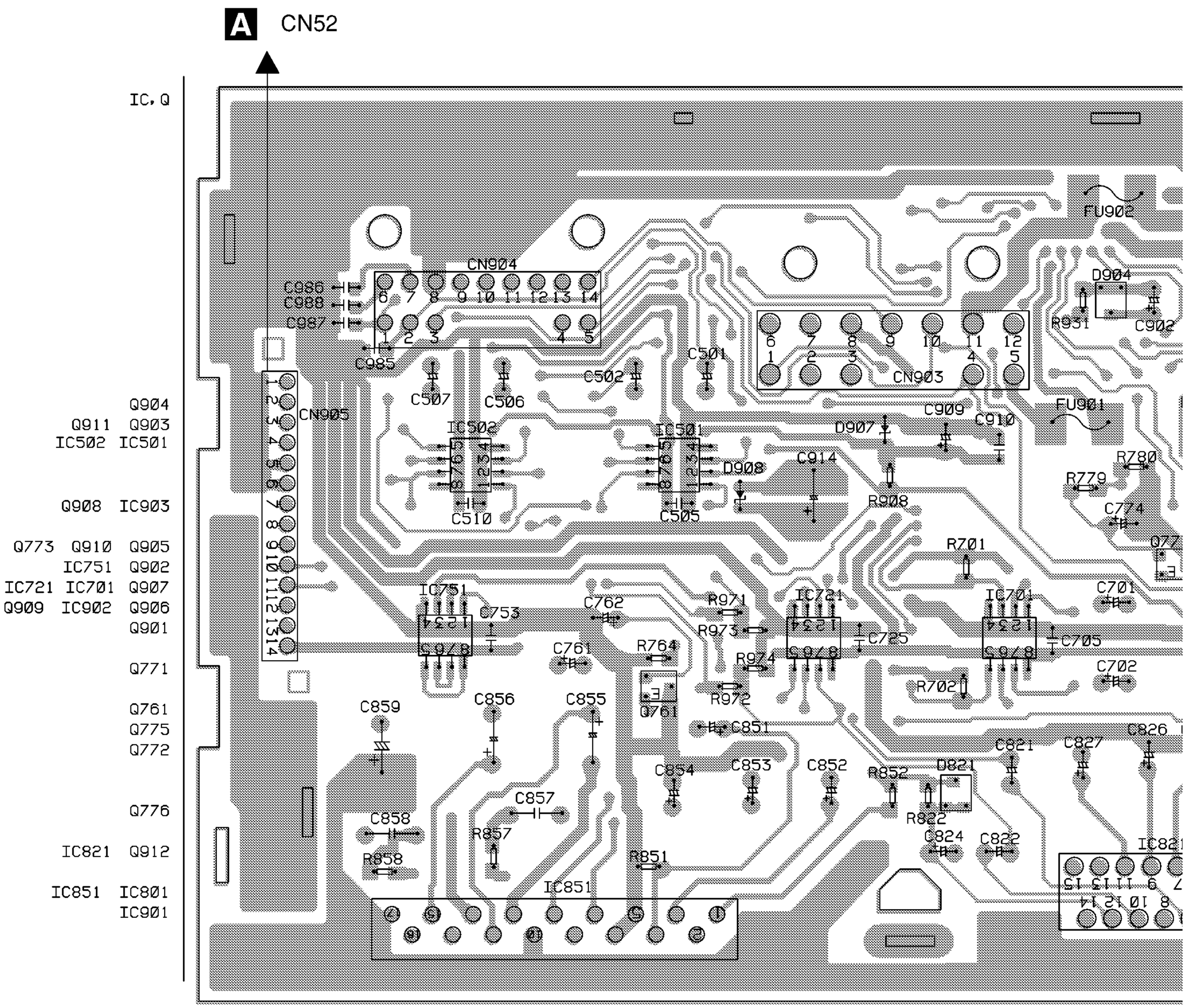
B AMP UNIT



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SIDE A

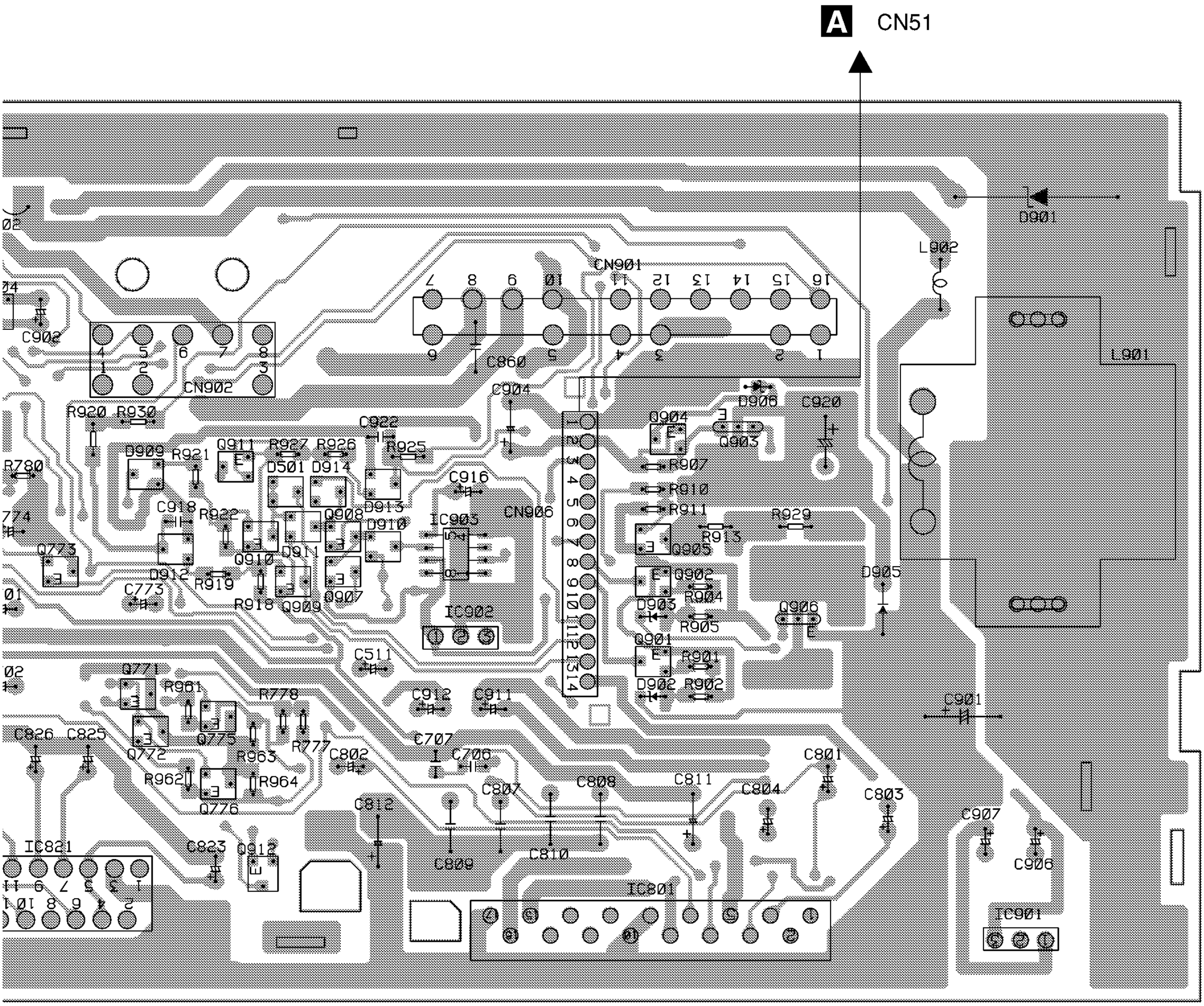

Fig. 9

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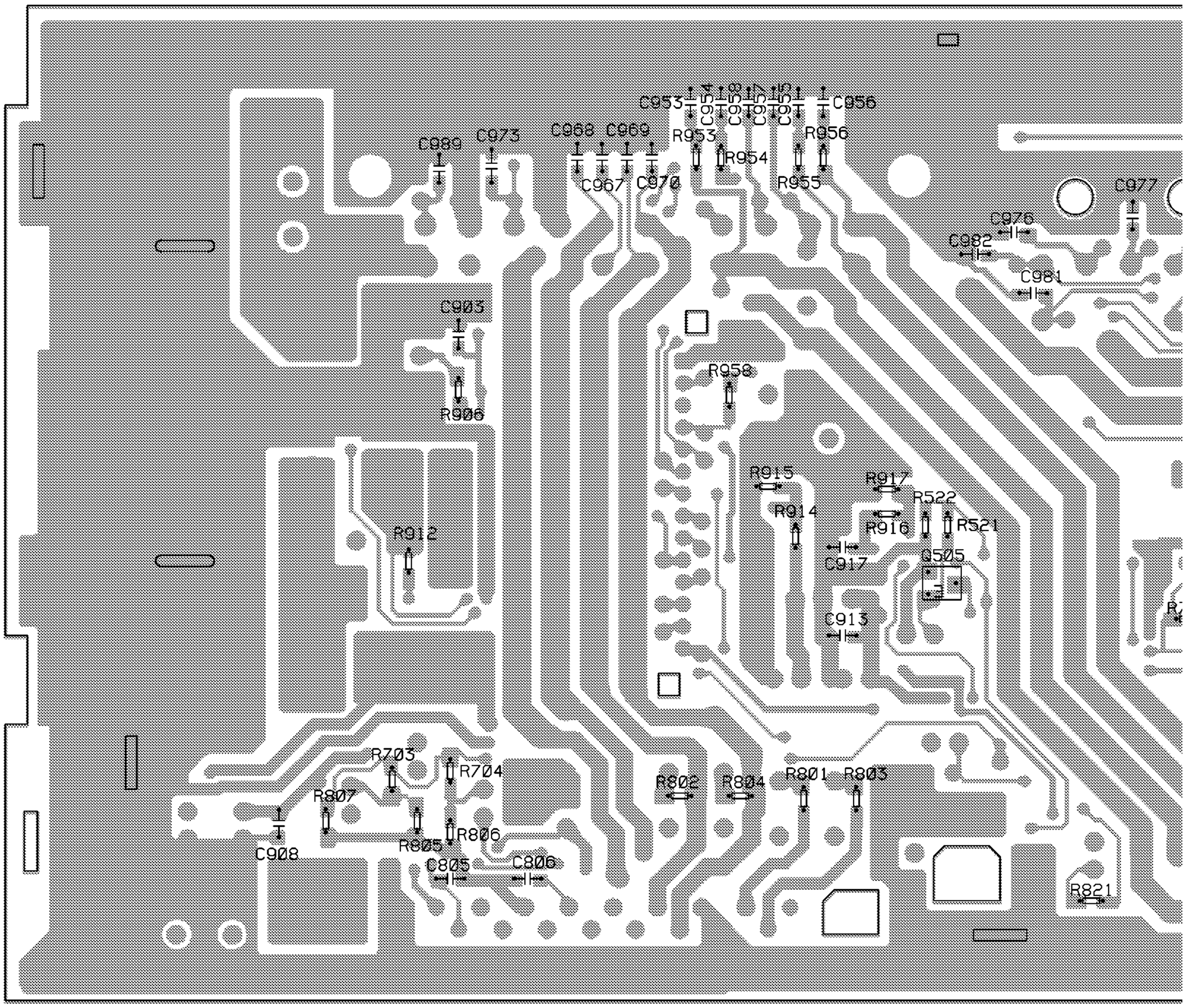
B AMP UNIT



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SIDE B

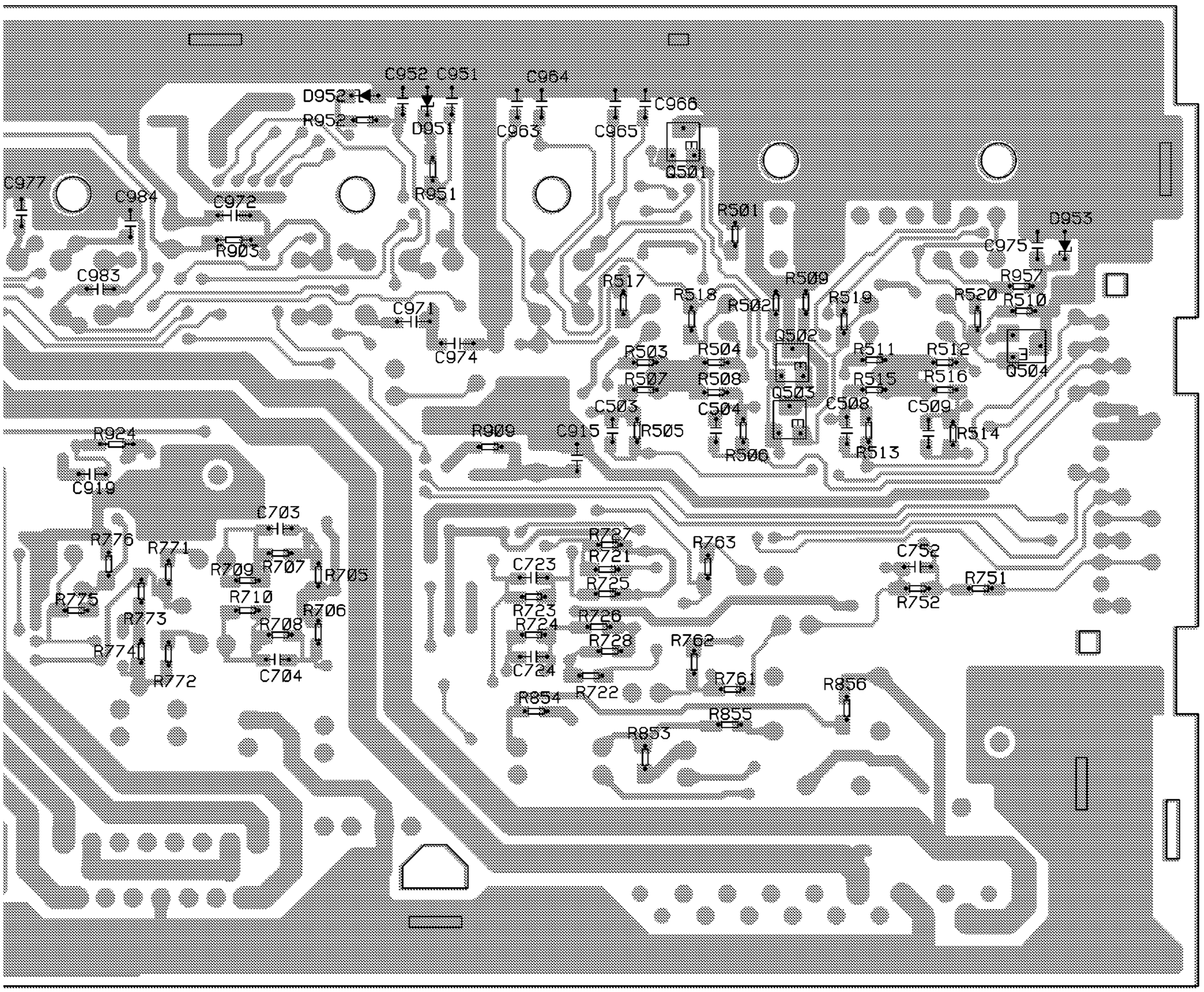

Fig. 10

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5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

A Unit Number: CWM4927(GM-8076ZT/E)
Unit Number: CWM4944(GM-8176ZT/E)
Unit Name : DSP Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	AK5350-VF
IC	121	IC	TC74HCU04AF
IC	131	IC	PD2055A
IC	141	IC	PD2055A
IC	151	IC	TC74HC74AF
IC	301	IC	PD5393B
IC	331	IC	S-80740AND4I
IC	341	IC	CA0008AM
IC	351	IC	SM5875AMP
IC	361	IC	SM5875AMP
IC	371	IC	SM5875AMP
IC	401	IC	PMJ003A
IC	421	IC	SN761027DL
IC	451	IC	NJM2068MD
IC	461	IC	NJM2068MD
IC	471	IC	NJM2068MD
IC	601	IC	PM2002
Q	601	Transistor	2SK209
Q	602	Transistor	2SC2712
D	481	Diode	MA8043(H)
D	601	Chip Diode	MA151K
D	602	Chip Diode	MA151K
D	603	Chip Diode	MA151K
L	51	Chip Inductor	LCTA2R2J3225
L	52	Inductor	LCTB1R0K3216
L	53	Chip Inductor	LCTA2R2J3225
L	101	Inductor	LCTB1R0K2125
L	102	Inductor	LCTB1R0K2125
L	103	Inductor	LCTB1R0K2125
L	104	Inductor	LCTB1R0K2125
L	105	Inductor	LCTB4R7K2125
L	106	Inductor	LCTB120K2125
L	107	Inductor	LCTB1R0K2125
L	121	Inductor	LCTBR82K2125
L	122	Inductor	CTF1305
L	131	Inductor	LCTBR82K2125
L	141	Inductor	LCTBR82K2125
L	151	Inductor	LCTB1R0K2125
L	301	Inductor	LCTB1R0K2125
L	302	Inductor	LCTB1R0K2125
L	341	Inductor	CTF1305
L	342	Inductor	CTF1305
L	351	Inductor	LCTB1R0K2125
L	352	Inductor	LCTB1R0K2125
L	353	Inductor	LCTB120K2125

=====Circuit Symbol and No.		===Part Name	Part No.
L	361	Inductor	LCTB1R0K2125
L	362	Inductor	LCTB1R0K2125
L	363	Inductor	LCTB120K2125
L	371	Inductor	LCTB1R0K2125
L	372	Inductor	LCTB1R0K2125
L	373	Inductor	LCTB120K2125
L	381	Inductor	LCTB1R0K2125
L	401	Inductor	LCTB1R0K2125
L	402	Inductor	LCTB1R0K2125
L	403	Inductor	LCTB1R0K2125
L	404	Inductor	LCTB1R0K2125
L	421	Inductor	LCTB1R0K2125
L	422	Inductor	LCTB1R0K2125
L	424	Inductor	LCTB1R0K2125
X	121	Resonator 22.5792MHz	CSS1406
X	301	Crystal 6.290MHz	CSS1305
X	351	Crystal Resonator 16.9344MHz	CSS1052
VR	601	Semi-fixed 10kΩB)	CCP1019
VR	602	Semi-fixed 10kΩ(B)	CCP1206
MIK	601	Microphone	CPM1011

RESISTORS

R	52		RS1/10S2R2J
R	101		RS1/10S331J
R	102		RS1/10S331J
R	103		RS1/10S331J
R	104		RS1/10S331J
R	105		RS1/10S221J
R	106		RS1/10S221J
R	107		RS1/10S221J
R	108		RS1/10S221J
R	121		RS1/10S105J
R	123		RS1/10S102J
R	131		RS1/10S221J
R	132		RS1/10S221J
R	133		RS1/10S102J
R	141		RS1/10S221J
R	142		RS1/10S221J
R	143		RS1/10S102J
R	151		RS1/10S102J
R	152		RS1/10S102J
R	301		RS1/10S473J
R	302		RA4C102J
R	303		RA3C102J
R	304		RS1/10S102J
R	305		RS1/10S102J
R	306		RS1/10S102J
R	307		RS1/10S102J
R	308		RA3C473J
R	309		RS1/10S102J
R	310		RS1/10S102J
R	312	(GM-8076ZT/E)	RS1/10S473J

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Circuit Symbol and No.		Part Name	Part No.
R	313	(GM-8176ZT/E)	RS1/10S473J
R	314		RS1/10S102J
R	315		RS1/10S102J
R	316		RS1/10S102J
R	317		RS1/10S473J
R	318		RS1/10S473J
R	319		RS1/10S473J
R	320		RS1/10S102J
R	321		RS1/10S473J
R	322		RS1/10S473J
R	323		RS1/10S473J
R	324		RS1/10S473J
R	325		RS1/10S473J
R	326		RS1/10S102J
R	327		RS1/10S102J
R	330		RS1/10S473J
R	331		RS1/10S104J
R	341		RS1/10S102J
R	342		RS1/10S102J
R	343		RS1/10S473J
R	344		RS1/10S473J
R	351		RS1/10S152J
R	352		RS1/10S152J
R	353		RS1/10S221J
R	361		RS1/10S152J
R	362		RS1/10S152J
R	363		RS1/10S221J
R	371		RS1/10S152J
R	373		RS1/10S221J
R	401		RS1/10S302J
R	402		RS1/10S302J
R	403		RS1/10S302J
R	404		RS1/10S103J
R	421		RS1/10S0R0J
R	422		RS1/10S0R0J
R	423		RS1/10S0R0J
R	424		RS1/10S0R0J
R	425		RS1/10S0R0J
R	451		RS1/10S103J
R	452		RS1/10S103J
R	453		RS1/10S153J
R	454		RS1/10S153J
R	455		RS1/10S682J
R	456		RS1/10S682J
R	457		RS1/10S101J
R	458		RS1/10S101J
R	461		RS1/10S103J
R	462		RS1/10S103J
R	463		RS1/10S153J
R	464		RS1/10S153J
R	465		RS1/10S682J
R	466		RS1/10S682J
R	467		RS1/10S101J
R	468		RS1/10S101J
R	471		RS1/10S103J
R	473		RS1/10S153J
R	475		RS1/10S682J
R	477		RS1/10S101J
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R	493		RS1/10S104J
R	494		RS1/10S101J
R	601		RS1/10S474J
R	602		RS1/10S472J
R	603		RS1/10S153J
R	604		RS1/10S153J
R	605		RS1/10S472J
R	606		RS1/10S472J
R	607		RS1/10S684J
R	608		RS1/10S472J
R	609		RS1/10S682J
R	610		RS1/10S103J
R	611		RS1/10S154J
R	612		RS1/10S472J
R	613		RS1/10S104J
R	614		RS1/10S392J
R	615		RS1/10S103J
R	616		RS1/10S102J
R	617		RS1/10S473J
R	618		RS1/10S393J
R	619		RS1/10S472J
R	620		RS1/10S471J
R	621		RS1/10S683J
R	622		RS1/10S103J
R	623		RS1/10S222J
R	624		RS1/10S0R0J
R	625		RS1/10S0R0J

CAPACITORS

Circuit Symbol and No.		Part Name	Part No.
C	101		CKSQYB152K50
C	102		CKSQYB152K50
C	103		CEAL101M10
C	104		CKSQYB104K50
C	105		CEAL100M16
C	106		CKSQYB104K50
C	107		CEAL101M10
C	108		CKSQYB104K50
C	109		CKSQYB104K50
C	110		CKSQYB104K50
C	111		CCSQCH101J50
C	112		CCSQCH101J50
C	113		CCSQCH101J50
C	114		CCSQCH101J50
C	121		CEAL100M16
C	122		CEAL100M16
C	123		CKSQYB103K50
C	124		CCSQCH100J50
C	125		CCSQCH100J50
C	131		CEAL100M16
C	132		CEAL100M16
C	133		CKSQYB103K50
C	134		CKSQYB102K50
C	141		CEAL100M16
C	142		CEAL100M16
C	143		CKSQYB103K50
C	144		CKSQYB102K50
C	151		CKSQYB103K50
C	152		CKSQYB103K50
C	301		CEAL100M16
C	302		CEAL100M16
C	303		CKSQYB103K50
C	304		CKSQYB102K50
C	331		CKSQYB103K50
C	341		CKSQYB103K50
C	351		CKSQYB272K50
C	352		CKSQYB272K50
C	353		CEAL100M16
C	354		CKSQYB103K50
C	355		CKSQYB103K50

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Circuit Symbol and No.	Part Name	Part No.
C 356		CEAL101M10
C 357		CKSQYB104K50
C 358		CCSQCH8R0D50
C 359		CCSQCH8R0D50
C 361		CKSQYB272K50
C 362		CKSQYB272K50
C 363		CEAL100M16
C 364		CKSQYB103K50
C 365		CKSQYB103K50
C 366		CEAL101M10
C 367		CKSQYB104K50
C 371		CKSQYB224K16
C 373		CEAL100M16
C 374		CKSQYB103K50
C 375		CKSQYB103K50
C 376		CEAL101M10
C 377		CKSQYB104K50
C 401		CEALNP1R0M50
C 402		CEALNP1R0M50
C 403		CEALNP1R0M50
C 404		CEALNP1R0M50
C 405		CEALNP1R0M50
C 406		CEALNP1R0M50
C 407		CEALNP1R0M50
C 408		CEALNP1R0M50
C 409		CEAL100M16
C 410		CKSQYB104K50
C 411		CEAL2R2M50
C 412		CEAL100M16
C 413		CEALNP4R7M16
C 414		CEALNP4R7M16
C 415		CEALNP4R7M16
C 416		CEALNP4R7M16
C 417		CKSQYB104K50
C 418		CKSQYB104K50
C 419		CKSQYB152K50
C 420		CKSQYB103K50
C 421		CKSQYB102K50
C 422		CKSQYB104K50
C 429		CEALNP100M10
C 430		CEALNP100M10
C 431		CEALNP100M10
C 432		CEALNP100M10
C 435		CEALNP100M10
C 436		CEALNP100M10
C 437		CEAL100M16
C 438		CEAL2R2M50
C 439		CEALNP1R0M50
C 441		CEAL100M16
C 442		CKSQYB103K50
C 443		CKSQYB223K50
C 445		CEALNP100M10
C 446		CKSQYB103K50
C 450		CKSQYB103K50
C 451		CEALNP100M10
C 452		CEALNP100M10
C 453		CKSQYB102K50
C 454		CKSQYB102K50
C 455		CCSQCH151J50
C 456		CCSQCH151J50
C 457		CKSQYB103K50
C 461		CEALNP100M10
C 462		CEALNP100M10
C 463		CKSQYB102K50
C 464		CKSQYB102K50
C 465		CCSQCH151J50
C 466		CCSQCH151J50
C 467		CKSQYB103K50
C 471		CEALNP100M10
C 473		CKSQYB823K25
C 475		CKSQYB123K25
C 477		CKSQYB103K50
C 481		CEAL101M10
C 482		CKSQYB102K50
C 491		CEALNP1R0M50
C 492		CEALNP1R0M50
C 493		CCSQCH100J50
C 494		CEALNP100M10
C 601		CEJA470M10
C 602		CKSQYB103K50
C 603		CEJA330M10
C 604		CEAL220M10
C 605		CEALNP100M10
C 606		CEALNP100M10
C 607		CKSQYB823K25
C 608		CEALNP220M16
C 609		CEALR68M50
C 610		CEAL100M16
C 611		CEJA470M10
C 612		CEAL100M16
C 613		CEALNP100M10
C 614		CEAL220M10
C 615		CEJA101M10
C 616		CEJA470M10
C 617		CEJA470M10
C 618		CEAL6R8M35
C 619		CEALR68M50
C 620		CEJA470M10
C 621		CKSQYB103K50

B

Unit Number: CWM4926(GM-8076ZT/E)
Unit Number: CWM5117(GM-8176ZT/E)
Unit Name : Amp Unit

MISCELLANEOUS

IC 501	IC		NJM2100M
IC 502	IC		NJM2100M
IC 701	IC		NJM2068MD
IC 721	IC		NJM2068MD
IC 751	IC		NJM2068MD
IC 801	IC		TA8221AH1
IC 821	IC		PAL001A
IC 851	IC		TA8225H-LF1
IC 901	IC		NJM7805FA
IC 902	IC		NJM78M08FA
IC 903	IC		M51957BFP
Q 761	Transistor		DTC323TK
Q 771	Transistor		DTC323TK
Q 772	Transistor		DTC323TK
Q 773	Transistor		DTC323TK
Q 775	Transistor		DTC323TK
Q 776	Transistor		DTC323TK
Q 901	Transistor		2SC2712
Q 902	Transistor		2SC2712
Q 903	Transistor		2SC3651
Q 904	Transistor		2SC2712
Q 905	Transistor		2SC2712
Q 906	Transistor		2SB1260
Q 907	Transistor		DTA144EK
Q 908	Transistor		DTC144EK
Q 909	Transistor		2SA1162
Q 910	Transistor		2SA1162
Q 911	Transistor		2SA1162
Q 912	Transistor		DTC144EK
D 501	Diode		RB421D

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Circuit Symbol and No.		Part Name	Part No.
D	821	Chip Diode	MA151K
D	901	Diode	5KP24A
D	902	Diode	RD7R5M(B3)
D	903	Diode	RD7R5M(B3)
D	904	Chip Diode	MA151K
D	905	Diode	ERA15-02VH
D	906	Diode	UDZ5R6(B)
D	907	Diode	RD2R7M(B2)
D	908	Diode	UDZ3R9(B)
D	909	Chip Diode	MA151WK
D	910	Chip Diode	MA151WK
D	911	Chip Diode	MA151WK
D	912	Chip Diode	MA151WK
D	913	Chip Diode	MA151WK
D	914	Chip Diode	MA151K
D	951	Diode	UDZ20(B)
D	952	Diode	UDZ20(B)
D	953	Diode	UDZ20(B)
L	901	Choke Coil 0.3mH	CTH1079

RESISTORS

R	501		RS1/10S153J
R	502		RS1/10S153J
R	503		RS1/10S333J
R	504		RS1/10S333J
R	505		RS1/10S0R0J
R	506		RS1/10S0R0J
R	509		RS1/10S153J
R	510		RS1/10S153J
R	511		RS1/10S333J
R	512		RS1/10S333J
R	513		RS1/10S0R0J
R	514		RS1/10S0R0J
R	517		RS1/10S162J
R	518		RS1/10S162J
R	519		RS1/10S162J
R	520		RS1/10S162J
R	701		RS1/10S473J
R	702		RS1/10S473J
R	703		RS1/10S104J
R	704		RS1/10S104J
R	705		RS1/10S202J
R	706		RS1/10S202J
R	707		RS1/10S152J
R	708		RS1/10S152J
R	721		RS1/10S0R0J
R	722		RS1/10S0R0J
R	723		RS1/10S182J
R	724		RS1/10S182J
R	725		RS1/10S123J
R	726		RS1/10S123J
R	727		RS1/10S103J
R	728		RS1/10S103J
R	751		RS1/10S432J
R	752		RS1/10S162J
R	761		RS1/10S102J
R	762		RS1/10S103J
R	763		RS1/10S103J
R	764		RS1/10S472J
R	771		RS1/10S102J
R	772		RS1/10S102J
R	773		RS1/10S223J
R	774		RS1/10S223J
R	775		RS1/10S103J
R	776		RS1/10S472J
R	777	(GM-8176ZT/E)	RS1/10S0R0J
R	778	(GM-8076ZT/E)	RS1/10S0R0J
R	779		RS1/10S472J
R	780		RS1/10S472J
R	801		RS1/10S2R2J
R	802		RS1/10S2R2J
R	803		RS1/10S2R2J
R	804		RS1/10S2R2J
R	805		RS1/10S272J
R	806		RS1/10S272J
R	807		RS1/10S221J
R	821		RS1/10S243J
R	822		RS1/10S224J
R	851		RS1/10S303J
R	852		RS1/10S102J
R	853		RS1/10S620J
R	854		RS1/10S620J
R	855		RS1/10S302J
R	856		RS1/10S302J
R	857		RS1/10S1R0J
R	858		RS1/10S1R0J
R	901		RS1/10S473J
R	902		RS1/10S104J
R	903		RS1/8S222J
R	904		RS1/10S473J
R	905		RS1/10S104J
R	906		RS1/10S153J
R	907		RS1/10S6R8J
R	908		RS1/10S102J
R	909		RS1/10S102J
R	910		RS1/10S472J
R	911		RS1/10S473J
R	912		RS1/10S103J
R	913		RS1/4S331J
R	914		RS1/10S113J
R	915		RS1/10S182J
R	916		RS1/10S332J
R	917		RS1/10S683J
R	918		RS1/10S472J
R	919		RS1/10S103J
R	920		RS1/8S102J
R	921		RS1/10S103J
R	922		RS1/10S472J
R	924		RS1/8S222J
R	926		RS1/10S103J
R	927		RS1/10S472J
R	929		RS1/4S331J
R	930		RS1/8S102J
R	931		RS1/10S472J
R	951		RS1/10S101J
R	952		RS1/10S101J
R	953		RS1/10S2R2J
R	954		RS1/10S2R2J
R	955		RS1/10S2R2J
R	956		RS1/10S2R2J
R	957		RS1/10S101J
R	958		RS1/10S0R0J
R	961		RS1/10S102J
R	962		RS1/10S102J
R	963		RS1/10S103J
R	964		RS1/10S103J

CAPACITORS

C	501		CEJANP1R0M50
C	502		CEJANP1R0M50
C	505		CKSQYB473K50
C	506		CEJANP1R0M50
C	507		CEJANP1R0M50

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=====Circuit Symbol and No.	===Part Name	Part No.
C 510		CKSQYB473K50
C 701		CEJA2R2M50
C 702		CEJA2R2M50
C 703		CCSQCH561J50
C 704		CCSQCH561J50
C 705		CKSQYB473K50
C 706		CKSQYB473K50
C 707		CKSQYB224K16
C 723		CCSQCH471J50
C 724		CCSQCH471J50
C 725		CKSQYB473K50
C 752		CKSQYB224K16
C 753		CKSQYB473K50
C 761		CEJA4R7M35
C 762		CEJA100M16
C 773		CEJA100M16
C 774		CEJA2R2M50
C 801		CEANLR47M50
C 802		CEANLR47M50
C 803		CEANL4R7M50
C 804		CEANL4R7M50
C 805		CKSQYB102K50
C 806		CKSQYB102K50
C 807		CFTNA154J50
C 808		CFTNA154J50
C 809		CFTNA154J50
C 810		CFTNA154J50
C 811		CEAS221M16
C 821	1μF/50V	CCH1296
C 822	1μF/50V	CCH1296
C 823		CEJAR47M50
C 824		CEJAR22M50
C 825		CEJA1R0M50
C 826		CEJA2R2M50
C 827		CEJA470M16
C 851		CEANL1R0M50
C 852		CEANL101M16
C 853		CEANL101M16
C 854		CEJA470M16
C 855		CEAS221M16
C 856		CEAS221M16
C 857		CFTNA473J50
C 858		CFTNA473J50
C 859		CEAS471M16
C 860		CQMA102J50
C 901	3300μF/16V	CCH1163
C 902		CEJA1R0M50
C 903		CKSQYB473K50
C 904		CEAS221M16
C 906		CEHAR010M50
C 907		CEHAR100M16
C 908		CKSQYB473K50
C 909		CEAS101M16
C 910		CKSQYB473K50
C 911		CEJA1R0M50
C 912		CEJA100M16
C 913		CKSQYB473K50
C 914		CEAS221M16
C 915		CKSQYB473K50
C 916		CEJA1R0M50
C 917		CKSQYB473K50
C 918		CKSQYB473K50
C 919		CKSQYB473K50
C 920		CEAS471M16
C 951		CKSQYB221K50

=====Circuit Symbol and No.	===Part Name	Part No.
C 952		CKSQYB221K50
C 953		CKSQYB224K16
C 954		CKSQYB224K16
C 955		CKSQYB224K16
C 956		CKSQYB224K16
C 957		CKSQYB102K50
C 958		CKSQYB102K50
C 963		CKSQYB102K50
C 964		CKSQYB102K50
C 965		CKSQYB102K50
C 966		CKSQYB102K50
C 967		CKSQYB102K50
C 968		CKSQYB102K50
C 969		CKSQYB102K50
C 970		CKSQYB102K50
C 971		CKSYB102K50
C 972		CKSYB102K50
C 973		CKSYB102K50
C 974		CKSYB102K50
C 975		CKSQYB221K50
C 976		CKSQYB102K50
C 981		CKSQYB102K50
C 982		CKSQYB102K50
C 983		CKSQYB102K50
C 984		CKSQYB102K50
C 989		CKSQYB102K50

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6. ADJUSTMENT

● Jigs

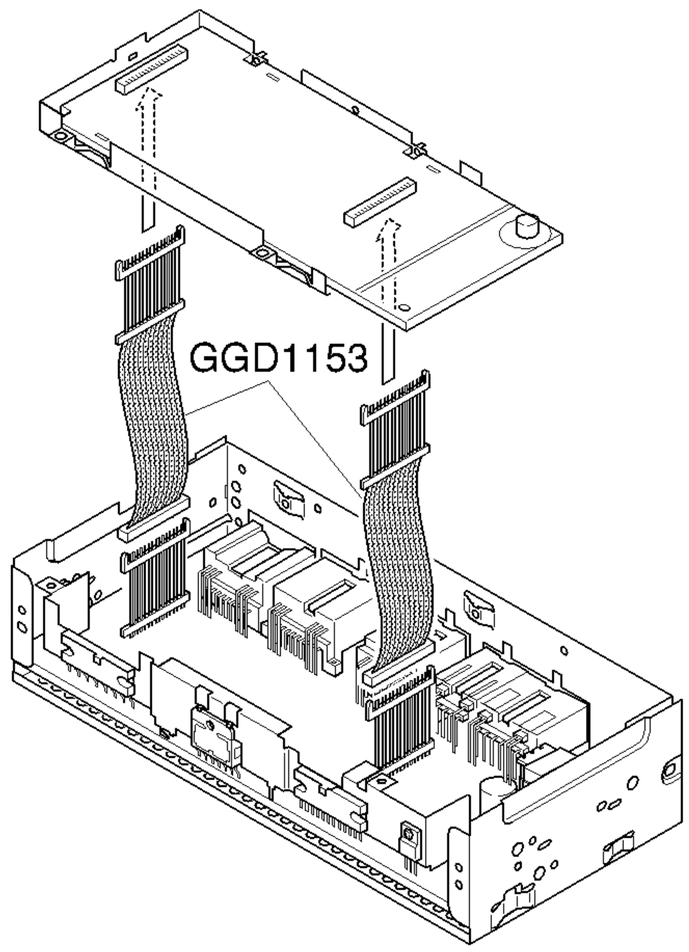

Fig. 11

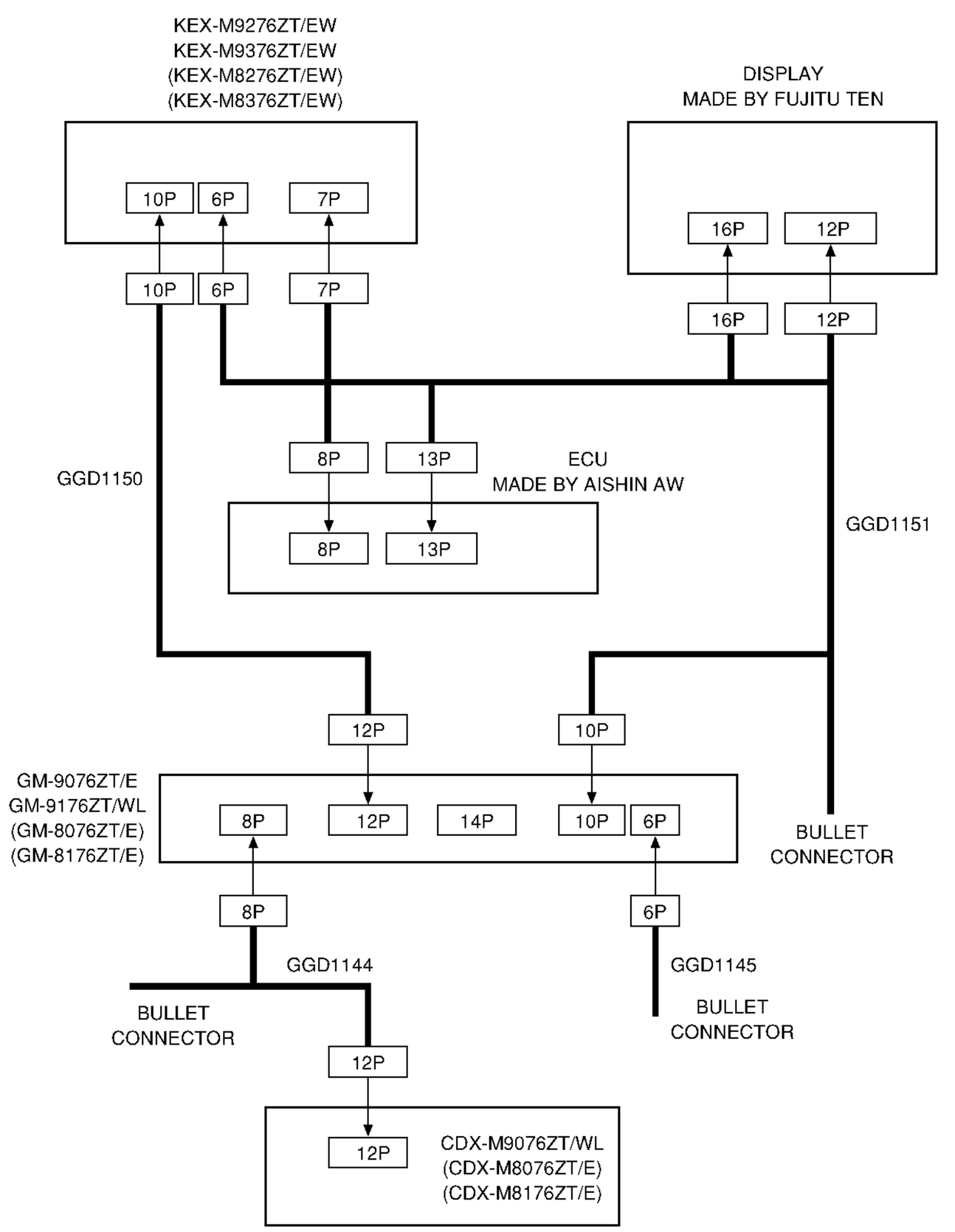

Fig. 12

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ASL SECTION

Preset conditions

1. Set VR601 and VR602 around the center of the adjustable range.
2. Ground pins 3 and 16 of IC601.

Step No.	Input (MIC)	Output (Pin 22)	Adjustment		
			Adj.point	Spec.	Conditions
1	By using an oscillator, apply a sine wave of 7Hz/2.5mV to the MIC terminal (+) via a 600-ohm resistor.	Observe the output at Pin 22 on a DC voltmeter (pointer-type).	VR602	1.2±0.3V	Pin 16:Ground Pin 3:Open Wait for 20 seconds.
2	By using an oscillator, apply a sine wave of 7Hz/79mV to the MIC terminal (+) via a 600-ohm resistor.	Observe the output at Pin 22 on a digital multimeter.	VR601	4.6±0.1V	Pin 16:Ground Pin 3:Ground
3	Repeat Steps 1 and 2 until doth adjustments satisfy the specifications.				
4	By using the jig(CAN-906,CAN-912), apply a sine wave of 100dB-SPL voltage directly to the MIC terminal.	Observe the output at Pin 22 on a digital multimeter.	VR602	3.3±0.1V	Pin 16:Ground Pin 3:Open
5	End				

To connect the Amp unit and the DSP unit, use Jig GGD1153.

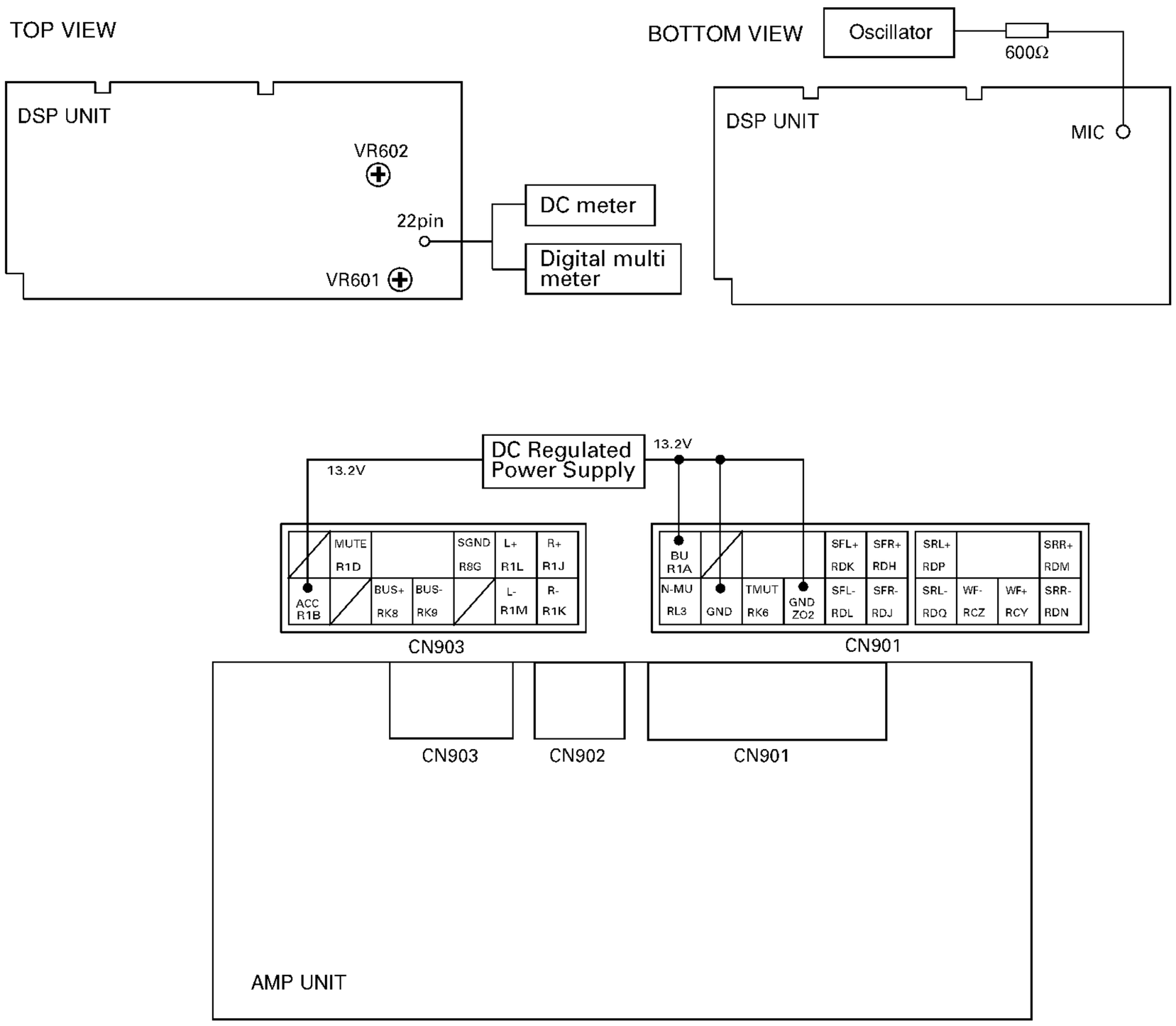

Fig. 13

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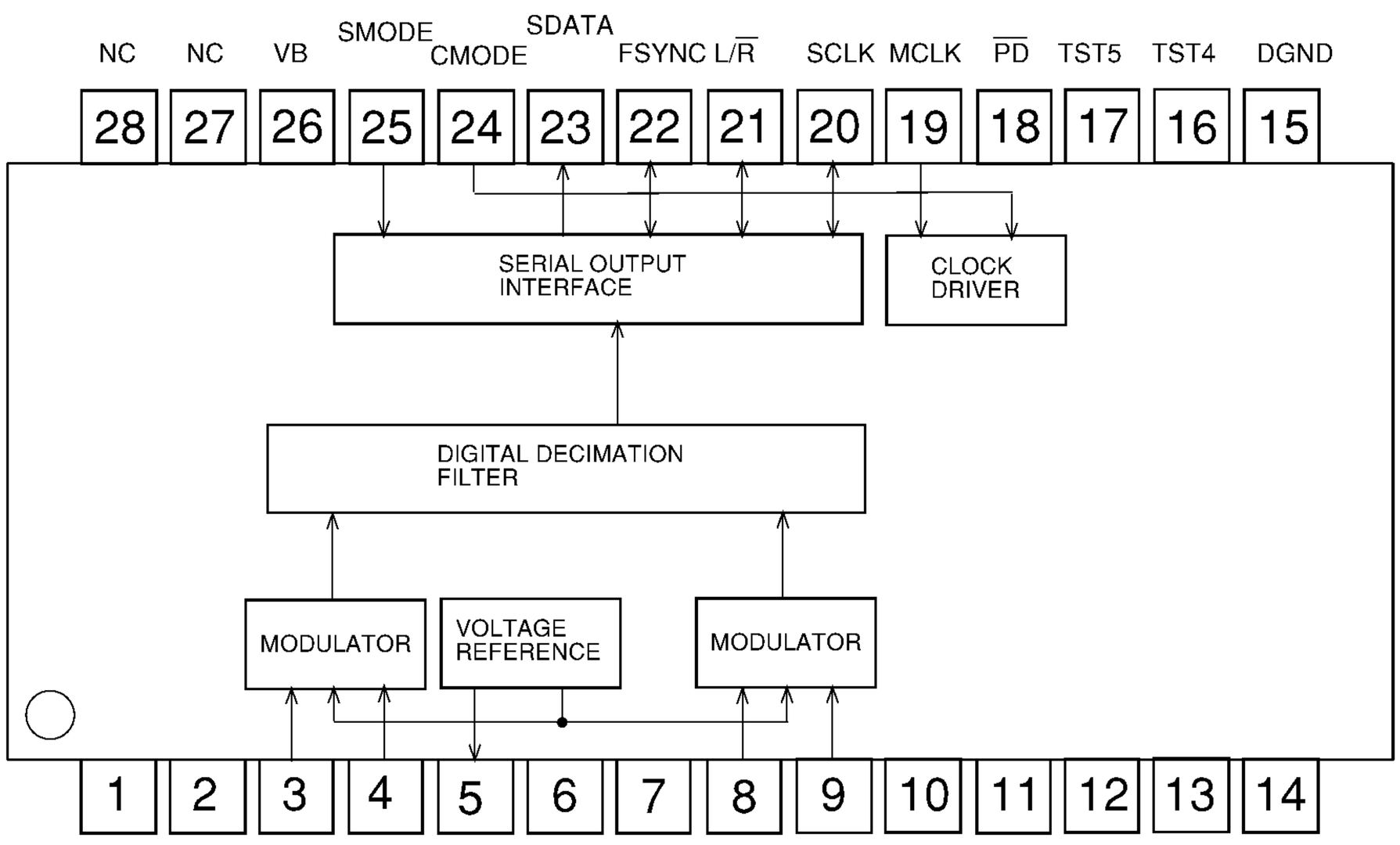
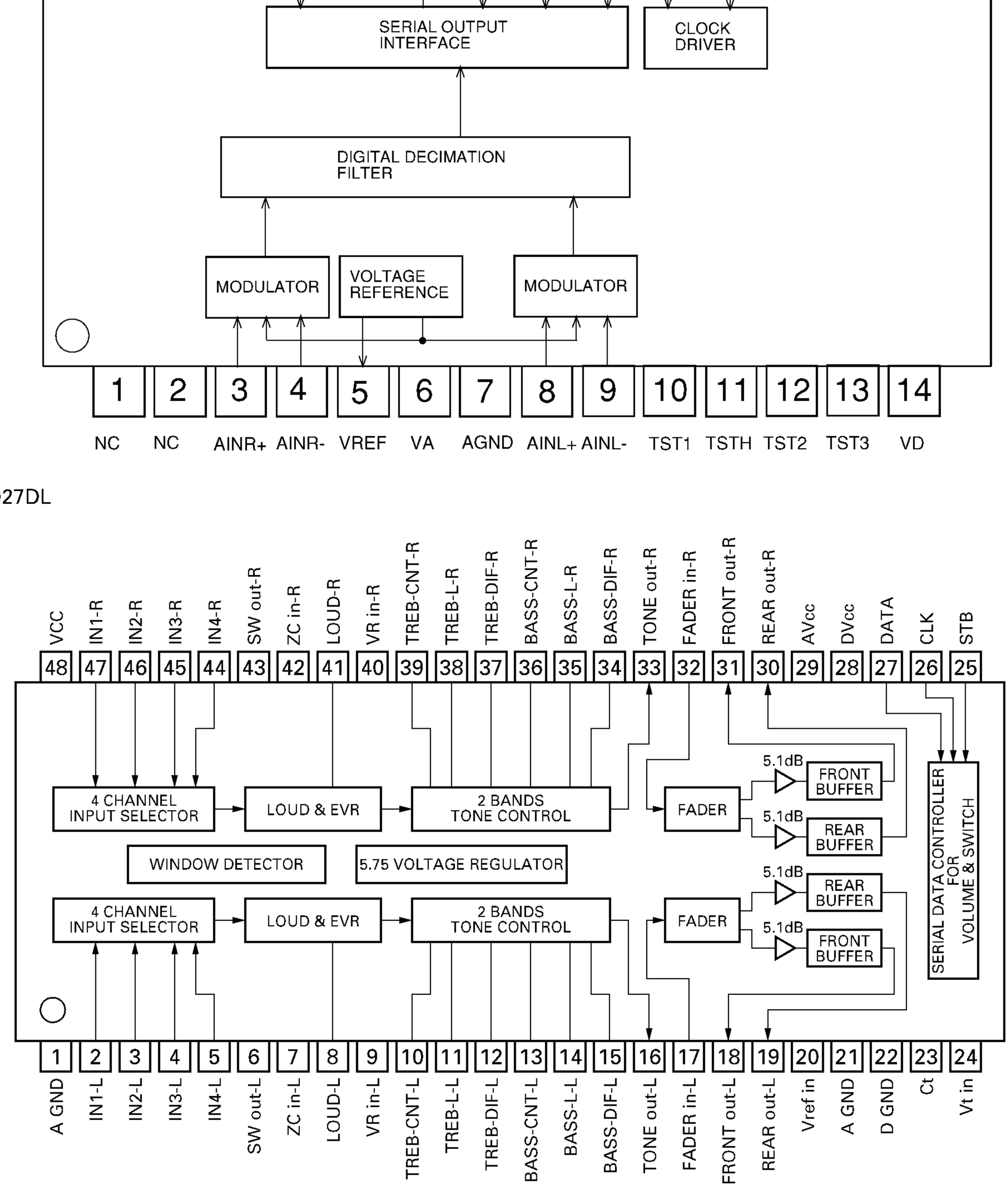
7. GENERAL INFORMATION

7.1 IC

AK5350-VF



SN761027DL



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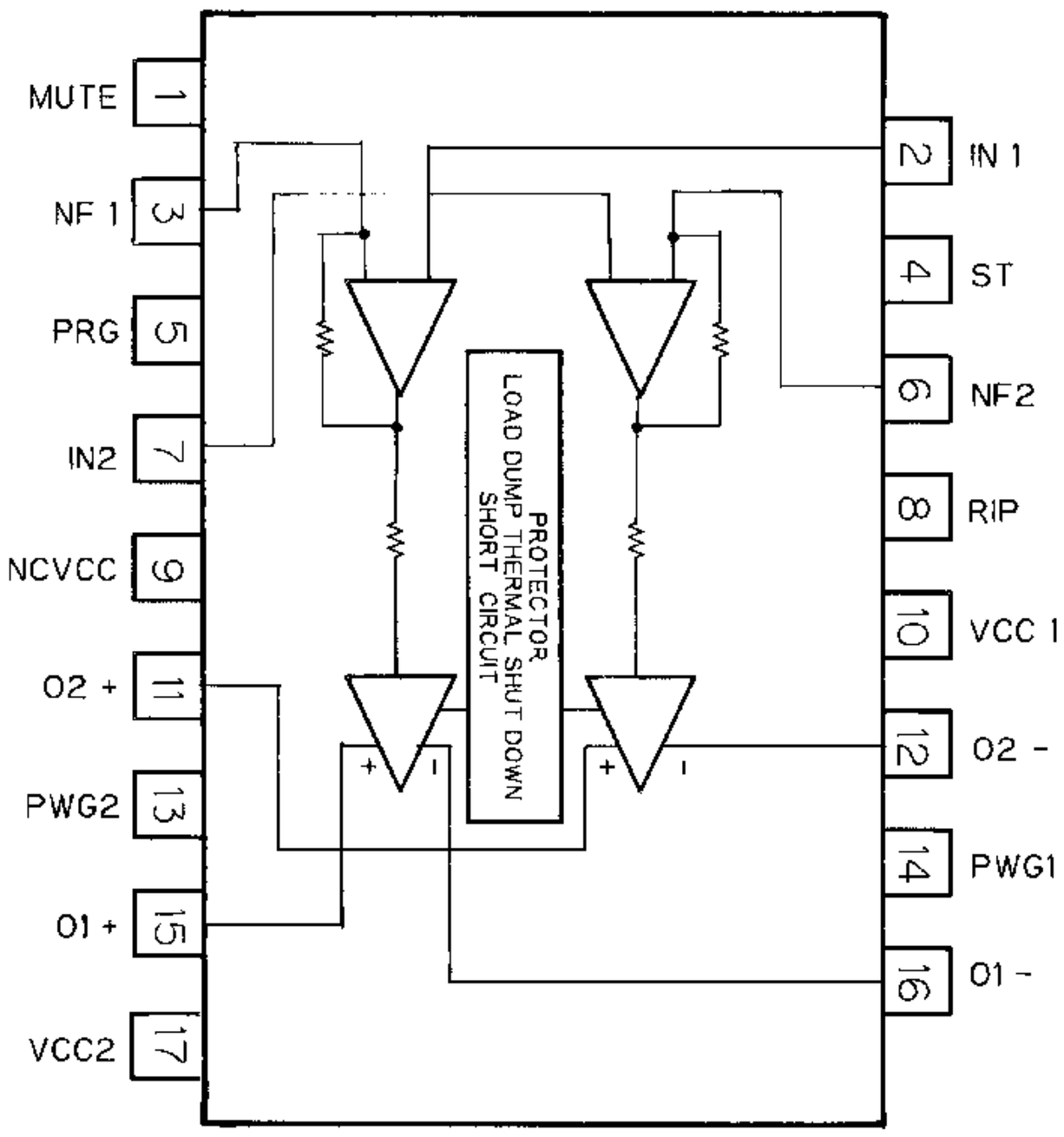
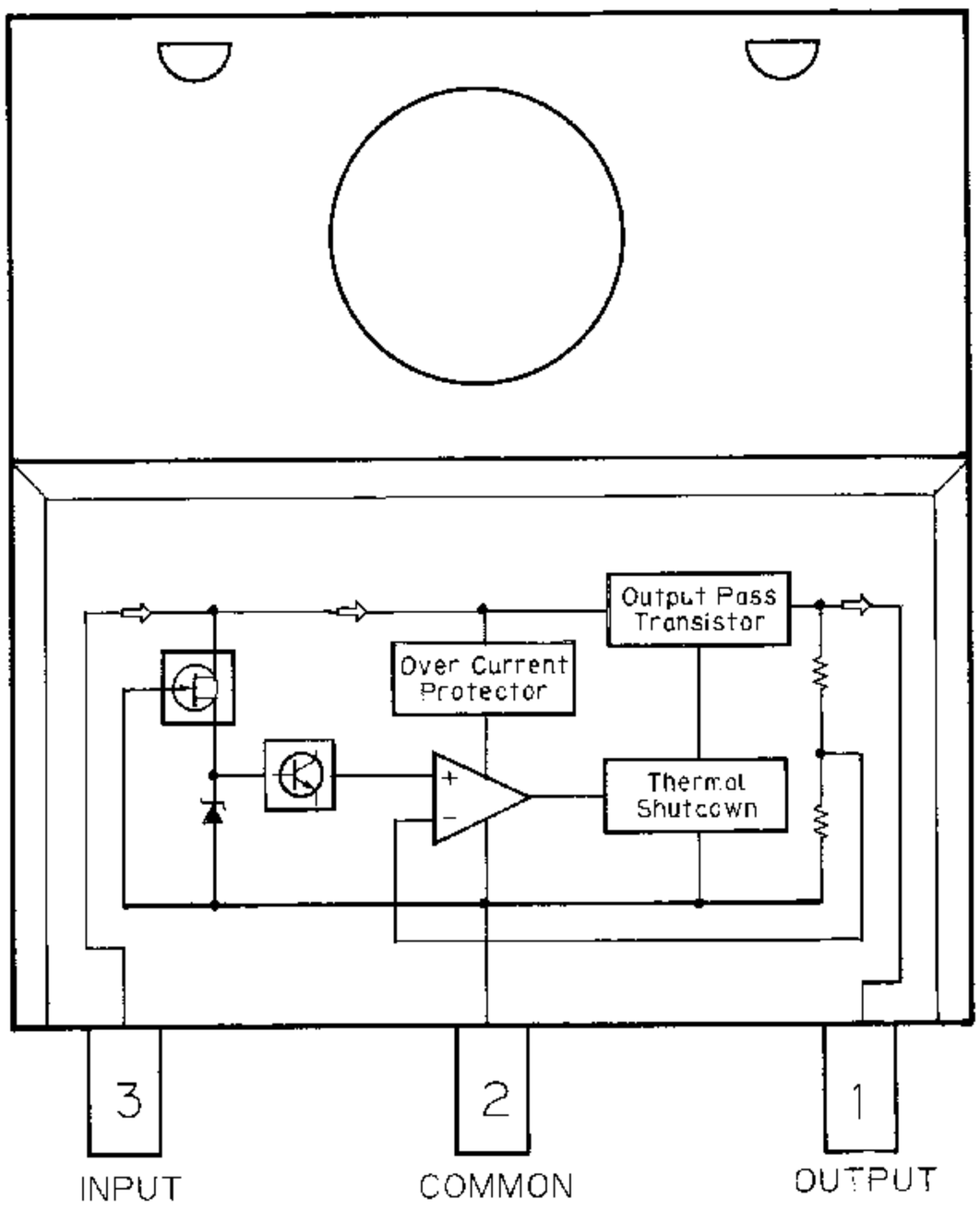
TA8221AH1



NJM78M08FA



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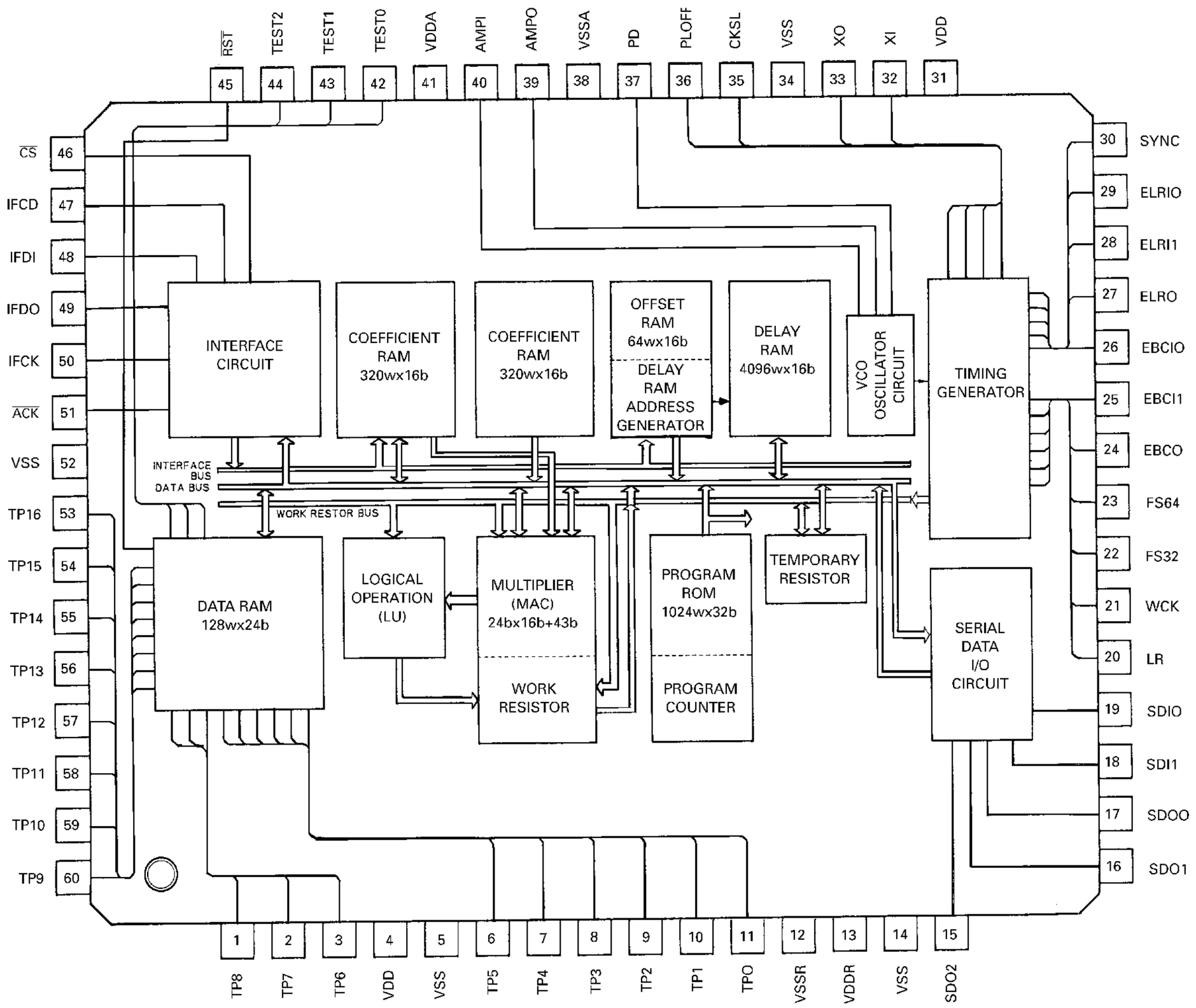
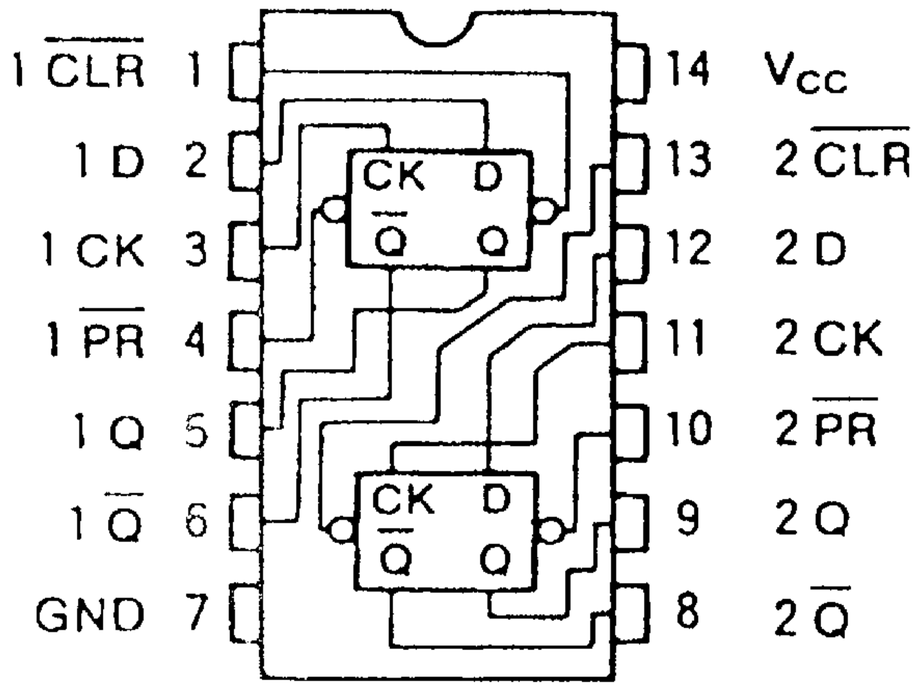
PD2055A



TC74HC74AF



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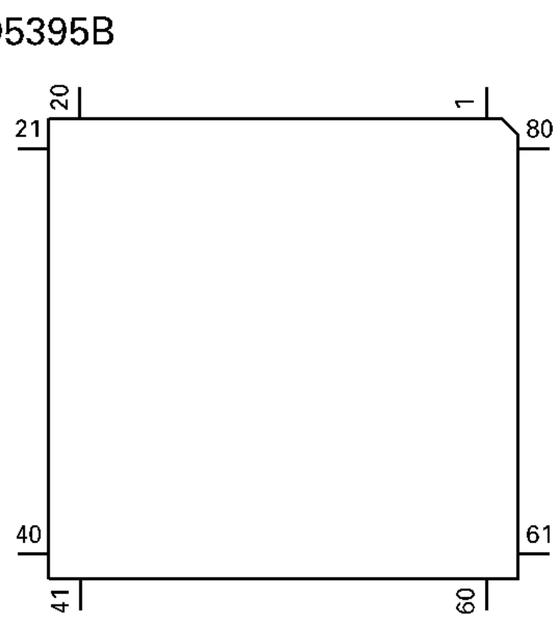
● Pin Functions (PD5393B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	ASLIN	I		Difference of noise and signal input
2	TLMT	I		TEL mute input
3	AVCIN	I		AVC-LAN data input
4	AVCOUT	O	C	AVC-LAN data output
5	AVCPW	O	C	AVC-LAN driver power supply output
6	DSPACK	I		DSP-IC ACK input
7	DSPCK	O	C	DSP serial clock output
8	DSPDT	O	C	DSP data output
9	DSPIN	I		DSP serial data input
10	DSPCD	O		DSP command/data output
11	DSPCS1	O	C	TC9332F chip select 1
12	DSPCS2	O	C	TC9332F chip select 2
13	PEE	O	C	Beep tone output
14	ASENS	I		ACC power sense input
15	BSEN	I		Back up power sense input
16	SYSPW	O	C	System power supply control output
17	TESTIN	I		Test program start input
18	TSEN	I		Test enable input
19	tsck	O	C	Test program clock output
20	TSO	O	C	Test program serial output
21	TSIN	I		Test data input
22	NC			Not used
23	MUTE	O	C	Mute output
24	SMUTEIN	I		System mute input
25	RESET	I		Reset input
26,27	NC			Not used
28	XIN	I		Crystal oscillating element connection pin
29	XOUT	O		Crystal oscillating element connection pin
30	VSS			GND
31	NAVMUT	O	C	Navigation mute output
32–61	NC			Not used
62	MODEL0	I		Model select input
63	DSPMUTE	O	C	DSP mute output
64–68	NC			Not used
69	DSPERR2	I		DSP error detect input 2
70	DSPERR1	I		DSP error detect input 1
71	VCC			5V
72	VREF	I		A/D converter reference voltage input
73	AVSS	I		A/D GND
74	VCK1	O	C	Clock output for electronic volume
75	VCK2	O	C	Clock output electronic volume 2
76	VDT	O	C	Data output for electronic volume
77	VST	O	C	Strobe pulse output for electronic volume
78	NC			Not used
79	DPD2	O	C	A/D converter offset calibration output
80	DSPRST	O	C	DSP reset control

*PD5395B



Format	Meaning
C	C MOS

IC's marked by are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

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7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

● Removing the Case(Fig.14)

1. Remove the Seal marked with arrows.
2. Remove the seven screws A, seven screws B, remove the Case and Heat Sink.

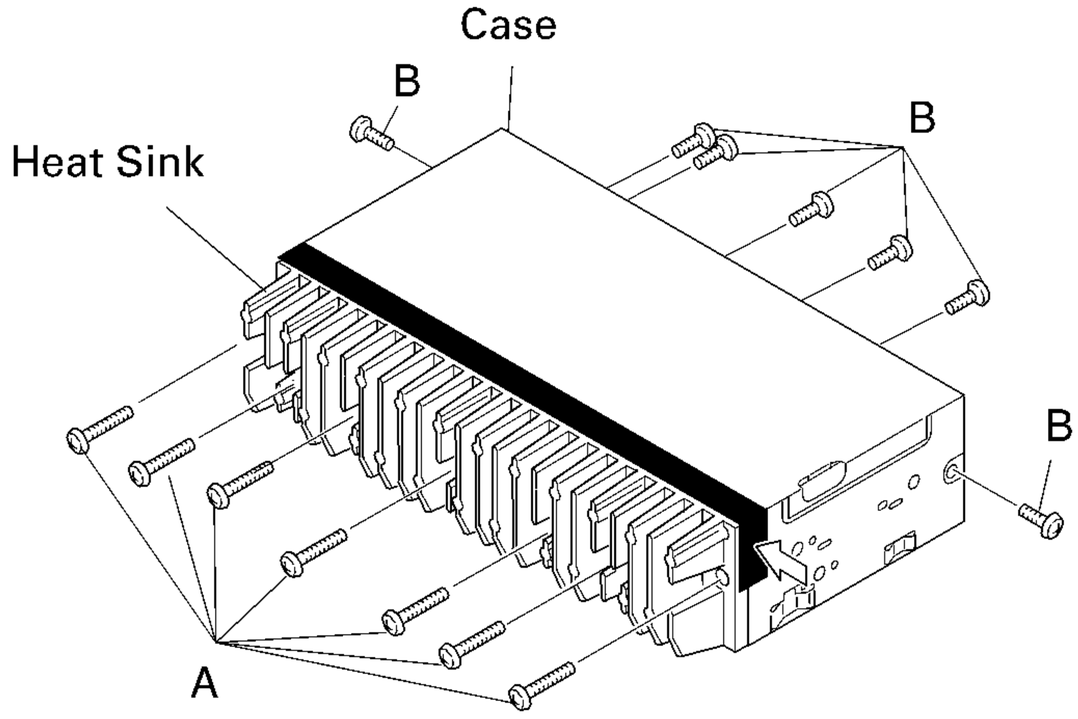

Fig. 14

● Removing the DSP Unit(Fig.15)

1. Remove the three screws C, and remove the upper Shield.
2. Remove the screw D.
3. Disconnect connectors CN51 and CN52 from CN905 and CN906 respectively by pulling them upwards.
4. Release the DSP Unit from 4 stoppers marked with arrows and remove the DSP Unit.

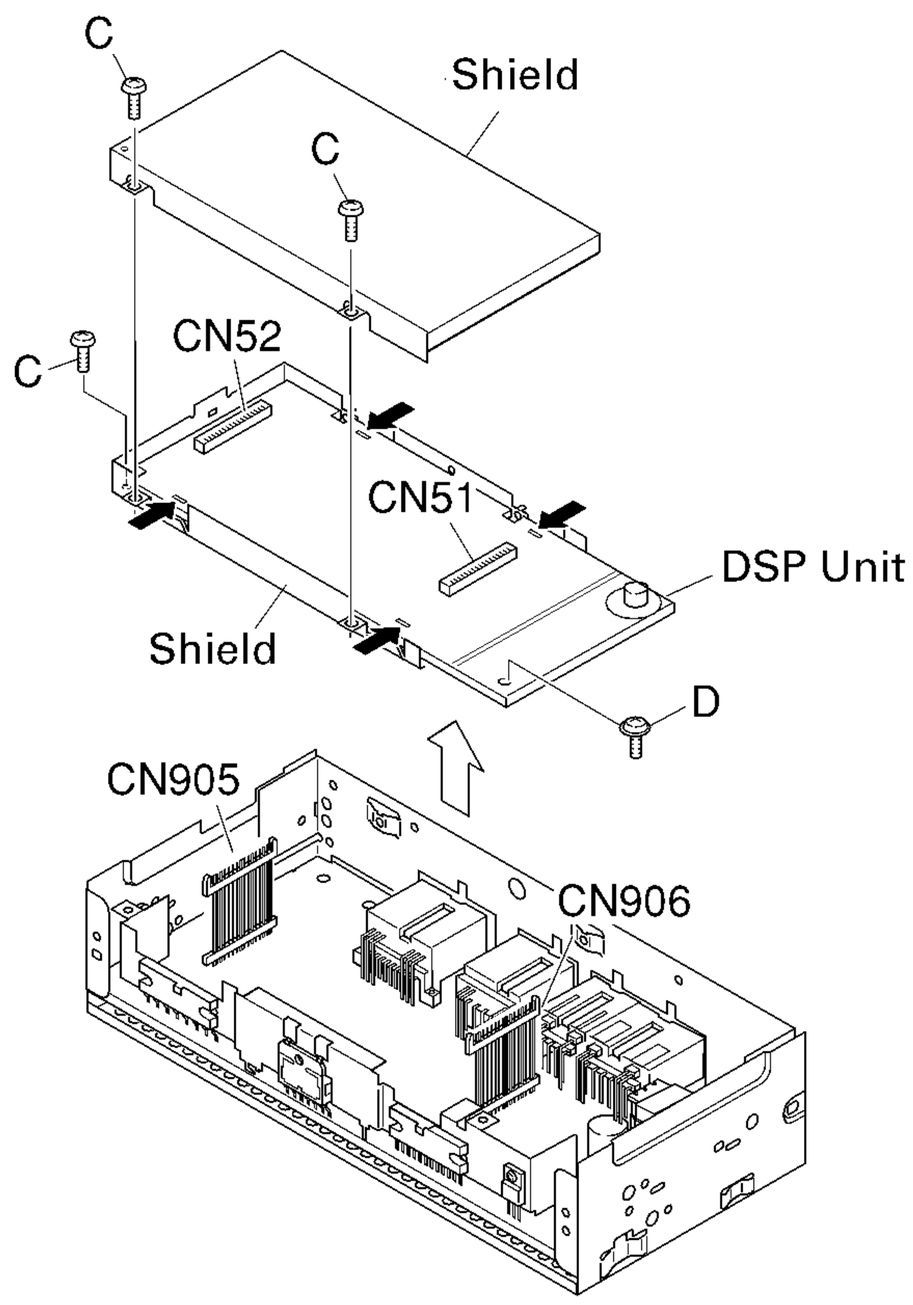

Fig.15

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7.2.2 CONNECTOR FUNCTION DESCRIPTION

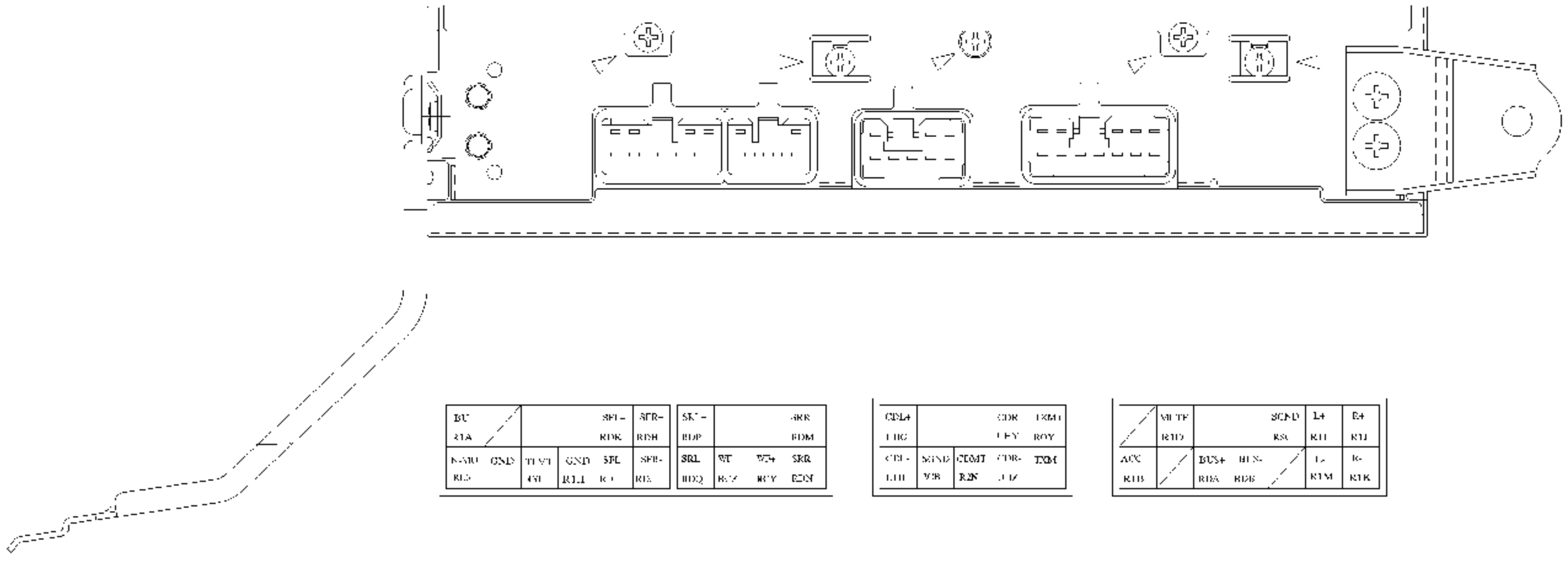

Fig. 16

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7.3 EXPLANATION

7.3.1 BLOCK DIAGRAM

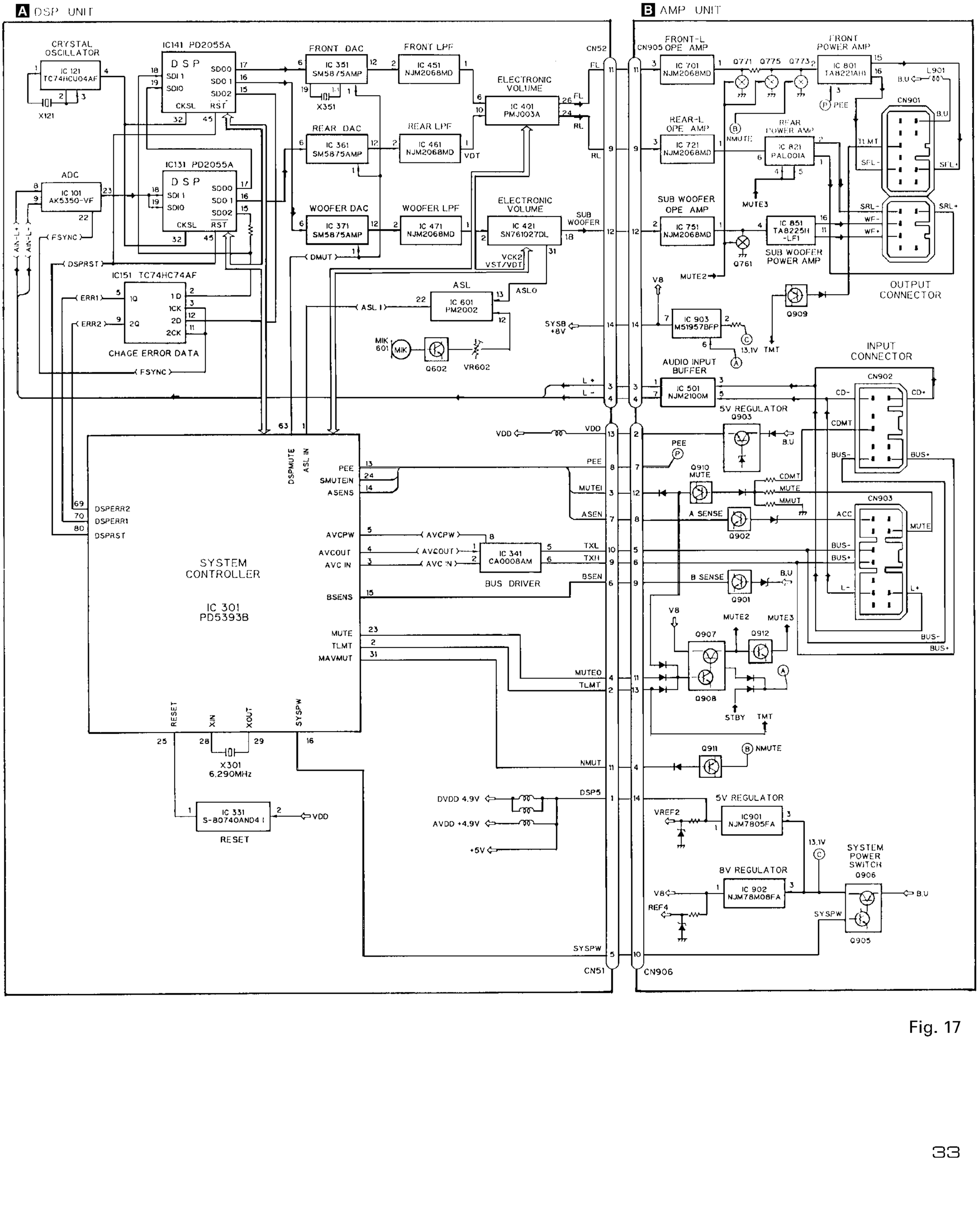

Fig. 17

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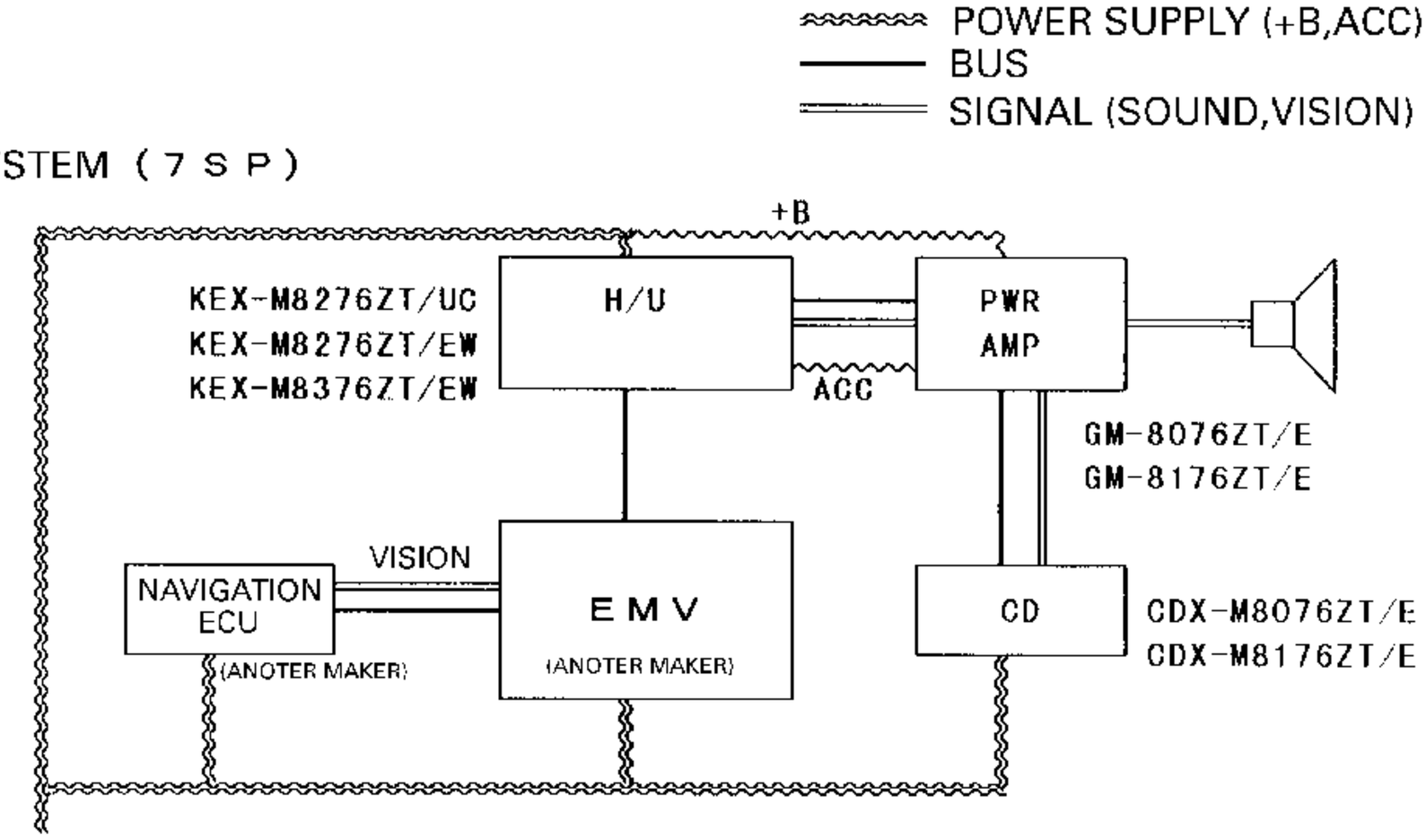
7.3.2 SYSTEM BLOCK DIAGRAM



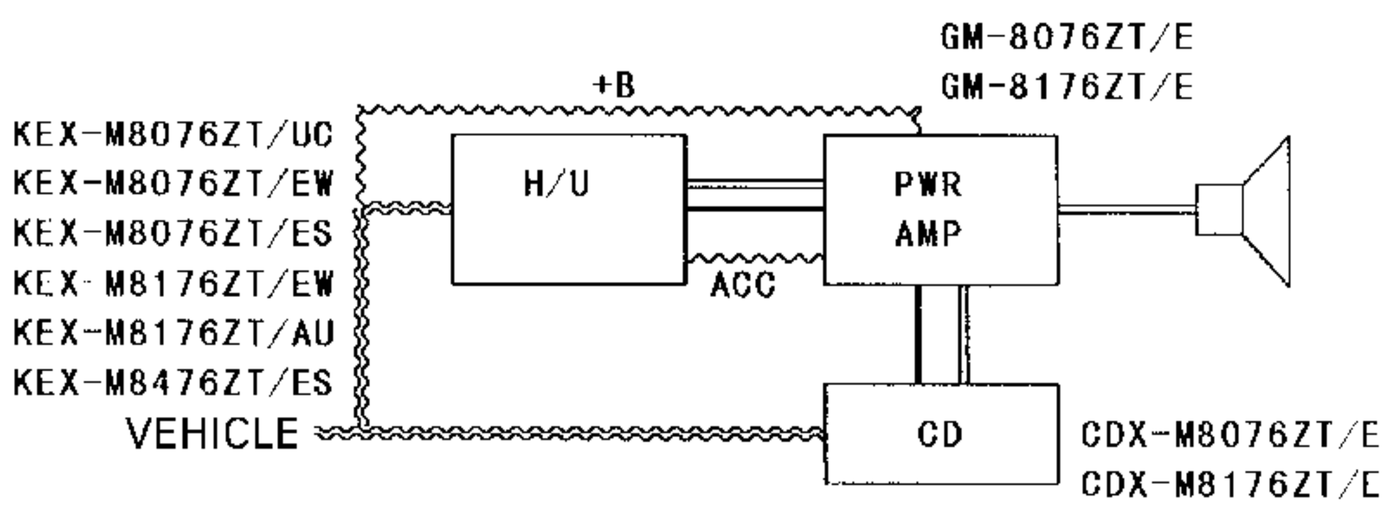


Fig. 18

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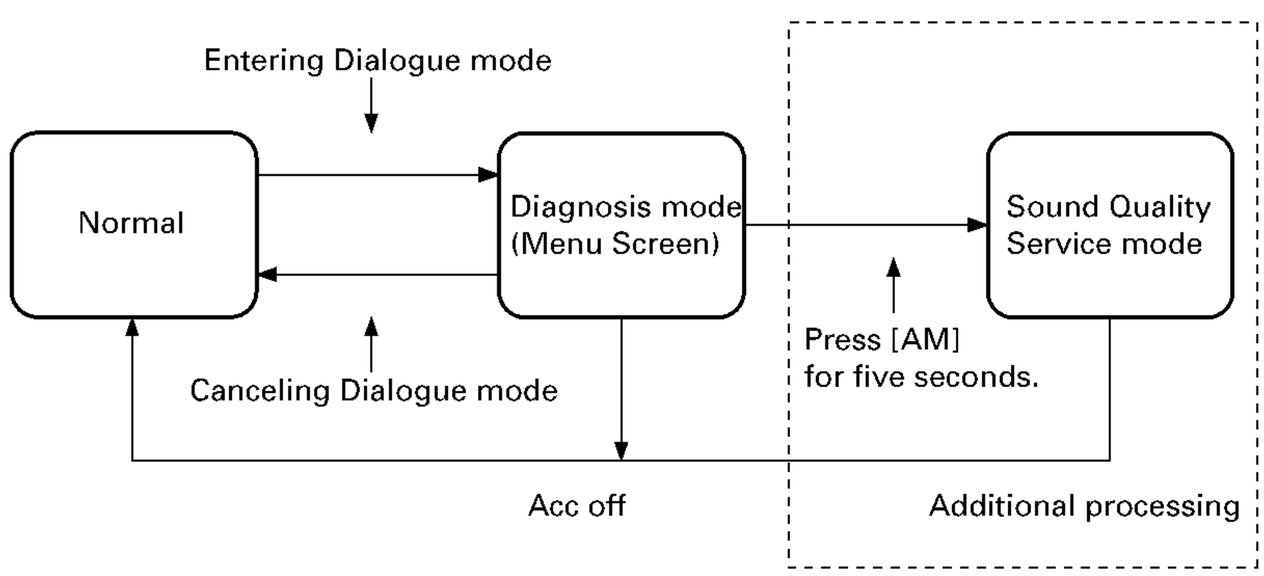
7.3.3 Service Mode For DSP Amplifier

1. Outline
   This specifications details operation according to our suggestion for answering complaint about sound quality in audio systems. It is based on an assumption that a dealer or service person operate the product to solve the problem.
2. Sound Quality Service Mode Function
   Sound Quality Service mode has the following functions:
   ① Frequency characteristics adjustment : Specifies two points (frequency/dB value) of equalizer (EQ) to adjust frequency characteristics. Also adjusts attenuation.
   ② Level adjustment : Adjusts sound levels of the front and rear speakers and woofer.

3. Activating Sound Quality Service Mode
   Use the following steps to activate Sound Quality Service mode.
   ① Confirm that ACC is ON, then activate Dialogue mode.
   (Operate according to the method of activation of diagnosis mode specified for the system.)
   ② Press the [AM] button of H/U in the MENU screen in Diagnosis mode .
   The system enters Sound Quality mode. Then, the system beeps one time and displays “AUDIO.” You cannot return to Dialogue mode by pressing a button from Sound Quality Service mode.
4. Canceling Sound Quality Service mode
   Setting ACC to OFF cancels Sound Quality Service mode. After that, the system will maintain sound quality set in Sound Quality Service mode.



Flowchart of activation/cancellation of Sound Quality Service mode Fig. 19

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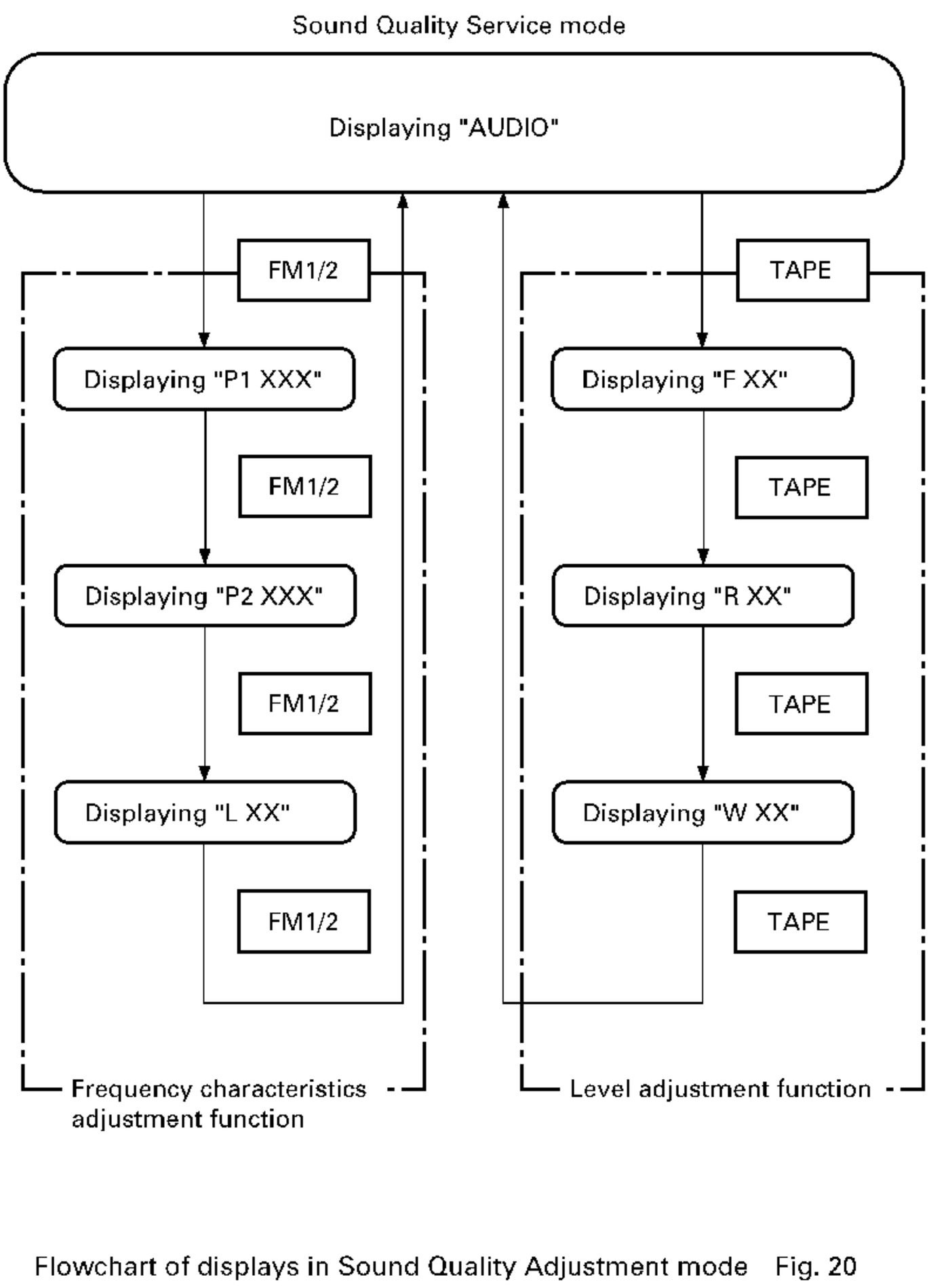

Flowchart of displays in Sound Quality Adjustment mode Fig. 20

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5. Details

① Frequency characteristics adjustment function

- The system changes submodes cyclically every time the [FM1/2] button is pressed when "AUDIO" is displayed.
  Set EQ Point 1 → Set EQ Point 2 → Set attenuation → "AUDIO"
- Set EQ Point 1
  The system displays “P1” and EQ management number. The EQ management number ascends/descends every time the UP/DOWN button is pressed.The EQ management number consists of three digits (000 to 286). Initial value is 000 (no setting).
- Set EQ Point 2
  The system displays “P2” and EQ management number. The EQ management number ascends/descends every time the UP/DOWN button is pressed. The EQ management number consists of three digits (000 to 176). Initial value is 000 (no setting).
- Set attenuation
  The system displays “L” and attenuation value. Use the UP/DOWN button to change attenuation within a range from 0 to -20 dB at increments of 1 dB. Attenuation value is shown in two digits from 00 to 20 (20 = -20 dB). Initial value is 00 (no setting).

② level adjustment function

- The system changes submodes cyclically every time the [TAPE] button is pressed when "AUDIO" is displayed.
  Set front → Set rear → Set woofer → “AUDIO”
- Set front
  The system displays "F" and level value.Use the UP/DOWN button to change level value within a range from 0 to -80 dB at increments of 1 dB. Level value is shown in two digits from 00 to 80 (80 = -80 dB). Initial value is 00 (no setting).
- Set rear
  The system displays "R" and level value. Use the UP/DOWN button to change level value within a range from 0 to -80 dB at increments of 1 dB. Level value is shown in two digits from 00 to 80 (80 = -80 dB). Initial value is 00 (no setting).
- Set woofer
  The system displays "W" and level value. Use the UP/DOWN button to change level value within a range from 0 to -80 dB at increments of 1 dB. Level value is shown in two digits from 00 to 80 (80 = -80 dB). Initial value is 00 (no setting).

Notes:

1) Pressing the TAPE button during adjustment of frequency characteristics is invalid. Pressing the [FM1/2] button during level adjustment is invalid.
2) The UP/DOWN button mentioned above means the [SEEK] key.

8. OPERATIONS AND SPECIFICATIONS

SPECIFICATIONS

Power source	13.2±0.1V(10.5-16.0V)
Grounding	NEGATIVE TYPE
Dimensions	293(W)x109(H)x130(D)
Weight	1.325kg
Maximum output power ..	21W(Front)
	16W(Rear)
	32W(Woofer)

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GM-8076ZT,8076ZT-91,8176ZT,8176ZT-91

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